FEDERAL SUPPORT OF SCIENTIFIC ACTIVITY IN SASKATCHEWAN 1979-80 to 1983-84

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Saskatchewan
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Technology

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Science and Technology
Division

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EXECUTIVE SUMMARY

1.0 Federal Support of Scientific Activity in Saskatchewan

1.1 This report provides summary data on the Federal Government's expenditures for scientific activity, with emphasis on Saskatchewan's share of support. The report also provides comparative data for other provinces for the years 1979-80 to 1983-84. In addition, regional data is provided for the period 1980-81 to 1984-85 for federal science and technology contractual payments provided under the government's contracting-out policy.

1.2 Total federal science expenditures increased by 77.5% between 1979-80 ($1,532 million) and 1983-84 ($2,720 million). Saskatchewan experienced a 75.0% increase in federal science funding from $40 million in 1979-80 to $70 million in 1983-84.

1.3 Based on population and gross domestic product proportions, Saskatchewan experienced a consistent shortfall in total federal science expenditures which increased from $18 million in 1979-80 to $34 million (population) and $36 million (GDP) in 1983-84.

1.4 Total federal intramural expenditures increased by 80.6% from $886 million in 1979-80 to $1,600 million in 1983-84. Federal intramural expenditures in Saskatchewan increased by 78.3% from $23 million in 1979-80 to $41 million in 1983-84. Saskatchewan's share of federal intramural expenditures remained unchanged at 2.6% with a slight dip to 2.4% in 1982-83.

1.5 Intramural expenditure population and GDP shortfall at $23 and $24 million in 1983-84 contributed to about two-thirds of the total federal expenditure shortfall experienced by Saskatchewan during that year.

1.6 Total federal extramural expenditures increased by 73.4% from $646 million in 1979-80 to $1,120 million in 1983-84. Federal extramural science expenditure in Saskatchewan increased by 70.6% from $17 million in 1979-80 to $29 million in 1983-84. Saskatchewan's rank, however, remained consistently low at eighth from 1980-81 onwards.

1.7 Granting council support of Canadian research more than doubled between 1979-80 ($219.1 million) and 1983-84 ($469.7 million). In 1983-84, Saskatchewan received $15.7 million (a 138.7% increase from $6.6 million in 1979-80) from the federal granting councils (3.3% of the combined council total).

1.8 In 1983-84, the granting councils accounted for 88.9% of federal research funds received by Saskatchewan universities (an increase from 76.5% in 1979-80).

1.9 Federal funding of scientific activity in the Canadian business sector increased 59.1% between 1979-80 ($263.8 million) and 1983-84 ($419.6 million). Saskatchewan experienced a lower growth rate of 25.2% with funding to its business sector increasing from $3.4 million in 1979-80 to $4.2 million in 1983-84.

1.10 Science and technology contracts under the federal government's contracting-out policy increased 109.2% between 1980-81 ($139.3 million) and 1984-85 ($291.5 million). Saskatchewan experienced a slightly higher growth of 110.1% for the same period with contracts increasing from $4.3 million (1980-81) to $8.9 million (1984-85).

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NOTES

1. This summary is based on complete data collected by the Federal Government in conjunction with the Treasury Board's Main Estimates and reported by Statistics Canada as well as data collected by Supply and Services Canada in conjunction with its contracting-out policy.

2. Components may not add to total due to rounding.

3. Unless otherwise noted, figures include research and experimental development and related scientific activity in both the natural sciences and engineering and the social sciences and humanities.

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FEDERAL SUPPORT OF SCIENTIFIC ACTIVITY

IN SASKATCHEWAN

1.0 Federal Science Expenditures

1.1 This report provides summary data on the Federal Government's expenditures for scientific activity, with emphasis on Saskatchewan's share of support. The report also provides comparative data for other provinces for the years 1979-80 to 1983-84.

1.2 Federal expenditures for scientific activity are of two types: intramural expenditures (expenditures made by the federal government on research and science where the activity is also performed by the federal government); or extramural expenditures (funds spent outside federal establishments where the activity is supported by the federal government but performed by another organization).

1.3 Saskatchewan experienced the seventh highest cumulative growth rate (75.0%) in total federal science expenditures for the five year period from 1979-80 to 1983-84. This growth rate lagged the national rate of 77.5% for the same period (Figure 1). This five year growth declined from a

83.3% rate for the previous period of 1978-79 to 1982-83 when Saskatchewan had the second highest rate among the provinces and exceeded the national rate of 55.7%.

On an annual basis, however, Saskatchewan declined from the highest percentage increase in 1979-80 (33.3%) to the second highest in 1983-84 (27.3%) (Table 1). This annual increase in 1983-84 was a significant improvement over 1982-83 where Saskatchewan had the seventh highest growth (14.6%).

1.4 Total federal science expenditures (intramural and extramural expenditures combined) increased from $1,532 million in 1979-80 to $2,720 million in 1983-84 and these expenditures in Saskatchewan increased from $40 million in 1979-80 to $70 million in 1983-84 (Table 1).

1.5 Saskatchewan's rank in terms of federal science expenditures remained consistently low at eighth position throughout the five year review period (Table 2).

1.6 Saskatchewan's allocation of federal science expenditures remained unchanged from 1979-80 at a 2.6% share (Table 2). This allocation of 2.6% in 1983-84 is an increase from a 2.4% share during the three year period of 1980-81 to 1982-83.

1.7 The National Capital Region receives the largest share of federal science expenditures followed by the Western provinces, Ontario, Quebec, and the Atlantic provinces (Figure 2). This regional distribution of funding has remained unchanged since 1979-80, however, the Western provinces and Ontario exchanged positions for the three year period of 1980-81 to 1982-83. There has been some fluctuation in individual provincial rankings (for example, Alberta fell from fifth in 1981-82 to seventh position in 1982-83 and 1983-84, and Newfoundland moved from tenth in 1982-83 to eighth in 1983-84).

1.8 When population distribution and contribution to gross domestic product are used as a basis for determining federal science expenditure allocation, Saskatchewan has consistently experienced a funding shortfall. Saskatchewan's population funding shortfall (calculated as the difference between anticipated federal science expenditures based on Saskatchewan's proportion of population and actual expenditures) has increased from $18 million in 1979-80 to $34 million in 1983-84, an 88.9% increase (Tables 3 to 7 and Figure 3).

Saskatchewan's GDP funding shortfall (calculated as the difference between anticipated federal science expenditure based on Saskatchewan's contribution to Canada's gross domestic product and actual expenditure) has experienced a higher growth than the population shortfall as shown by a doubling from $18 million in 1979-80 to $36 million in 1983-84.

1.9 On a regional basis, the Western provinces, with the exception of Manitoba, consistently incurred funding shortfalls over the five year period (Figure 4). The Atlantic provinces, with the exception of new Brunswick, have experienced significant improvements in federal science expenditures with respect to their population and gross domestic product bases. The regional imbalance caused by the disproportionate allocation of federal expenditures is clearly displayed in figure 4 by the position on the graph. A lower left position indicates that actual expenditures were less than anticipated for both population and GDP ratios; a lower right position indicates that actual expenditures were higher than anticipated based on GDP but lower than anticipated based on population; and an upper right position indicates that expenditures were higher than anticipated for both ratios.

The direction arrow indicates the degree of change in population/GDP allocation over the five year period of 1979-80 to 1983-84.

1.10 Saskatchewan had the third lowest per capita federal science expenditure in 1983-84 (seventh position out of nine regions reviewed) which was an improvement from the lowest (ninth) in 1981-82 and the second lowest (eighth) for the three other years (Table 8 and Figure 5). Per capita expenditure has increased from $42.18 in 1979-80 to $70.56 in 1983-84.

Figure 1

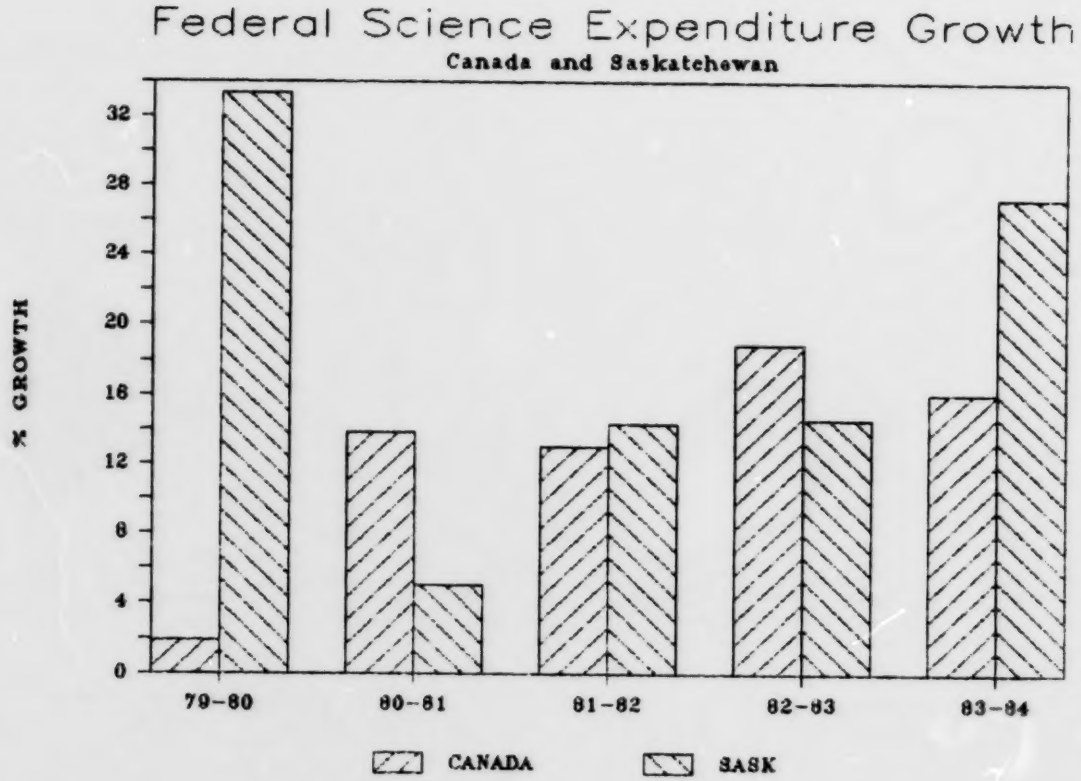
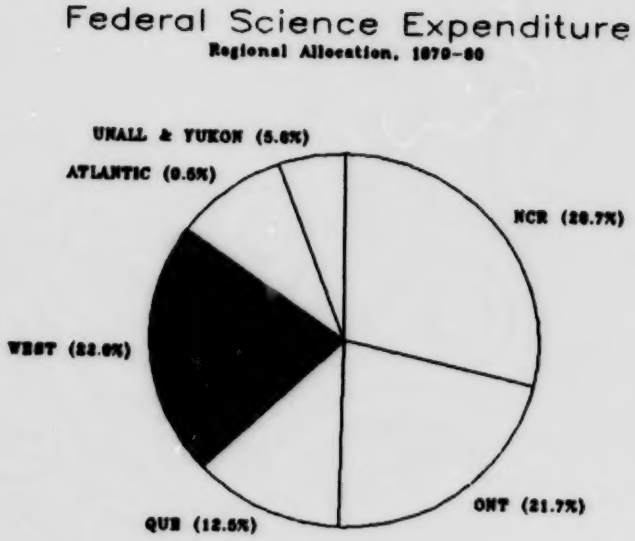
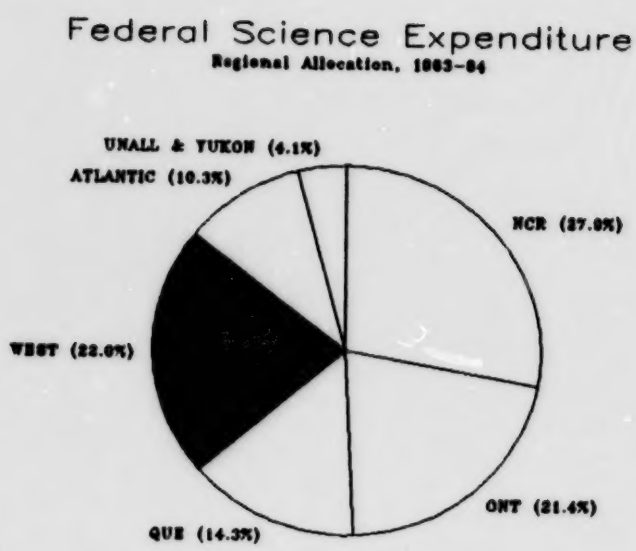

Federal Science Expenditure Growth
Canada and Saskatchewan
% GROWTH
32
28
24
20
16
12
8
4
0
79-80
80-81
81-82
82-83
83-84
CANADA
SASK

Figure 2





Note: UNALL means unallocated; NCR refers to National Capital Region.

Table 1
Federal Science Expenditure Growth
1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	$M	%	$M	%	$M	%	$M	%	$M	%
Nfld	26	-	29	11.5	31	6.9	46	48.9	72	56.5
PEI	4	-	4	-	8	200.0	9	12.5	9	-
NS	82	1.2	100	22.0	101	1.0	113	11.9	159	40.7
NB	32	14.3	33	3.1	37	12.1	47	27.0	44	(6.4)
Que	191	3.2	201	5.2	259	28.9	316	22.0	390	23.4
Ont	333	(4.9)	385	15.6	440	14.3	503	14.3	581	17.5
Man	69	(4.2)	82	18.8	107	30.5	126	17.8	156	23.8
SASK	40	33.3	42	5.0	48	14.3	55	14.6	70	27.3
Alta	97	12.8	106	9.3	119	12.3	110	(7.6)	133	20.9
BC	131	13.9	150	14.5	153	2.0	200	30.7	239	19.5
NCR	440	0.2	508	15.5	585	15.2	672	14.9	758	12.8
TOTAL	1532	1.9	1743	13.8	1970	13.0	2342	18.9	2720	16.1

Notes: 1. Brackets indicate a negative amount.
2. Components do not add to total due to the exclusion of unallocated funds and Yukon.
3. NCR refers to National Capital Region and includes Hull and Ottawa.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary, May 1985.

Table 2
Federal Science Expenditure Regional Allocation and Ranking
1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Nfld	1.7	10	1.7	10	1.6	10	2.0	10	2.6	8
PEI	0.3	11	0.2	11	0.4	11	0.4	11	0.3	11
NS	5.4	6	5.7	6	5.1	7	4.8	6	5.8	5
NB	2.1	9	1.9	9	1.9	9	2.0	9	1.6	10
Que	12.5	3	11.5	3	13.1	3	13.5	3	14.3	3
Ont	21.7	2	22.1	2	22.3	2	21.5	2	21.4	2
Man	4.5	7	4.7	7	5.4	6	5.4	5	5.7	6
SASK	2.6	8	2.4	8	2.4	8	2.4	8	2.6	8
Alta	6.3	5	6.1	5	6.0	5	4.7	7	4.9	7
BC	8.6	4	8.6	4	7.8	4	8.5	4	8.8	4
NCR	28.7	1	29.2	1	29.6	1	28.7	1	27.9	1
TOTAL	100.0		100.0		100.0		100.0		100.0	

Notes:
1. Components do not add to total due to the exclusion of unallocated funds and Yukon.
2. NCR refers to National Capital Region and includes Hull and Ottawa. NRC is included in ranking as a region.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary, May 1985.

Table 3
Population and GDP Federal Science Expenditure Ratios
1979-80

Region	Federal[1] Science Expenditure ($M)	National[2] Population Ratio (1979)	Population Equity Value[3] ($M)	Population Value Expenditure Ratio	National[4] GDP Ratio (1979)	GDP[5] Equity Value ($M)	GDP Value Expenditure Ratio
Nfld	26	.0237	34	0.76	.0139	20	1.30
PEI	4	.0051	7	0.57	.0028	4	1.00
NS	82	.0354	51	1.61	.0225	33	2.48
NB	32	.0291	42	0.76	.0202	29	1.10
Que	191	.2669	386	0.49	.2314	334	0.57
Ont	333	.3580	517	0.64	.3787	547	0.61
Man	69	.0433	63	1.10	.0382	55	1.25
SASK	40	.0401	58	0.70	.0403	58	0.69
Alta	97	.0864	125	0.78	.1279	185	0.52
BC	131	.1090	158	0.83	.1209	175	0.75
NCR	440	-	-	-	-	-	-
Ont & NCR	773	.3580	517	1.50	.3787	547	1.41
TOTAL	1445						
SASK SHORTFALL			18			18	

1 Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985. Total excludes unallocated funds and Yukon.
2 Statistics Canada Daily -- June 1, 1983.
3 "Population Equity Value" represents federal expenditure distribution if based on population proportions.
4 Statistics Canada -- Provincial Economic Accounts. GDP at market prices.
5 "GDP Equity Value" represents federal expenditure distribution if based on gross domestic product proportions.

Table 4
Population and GDP Federal Science Expenditure Ratios
1980-81

Region	Federal[1] Science Expenditure ($M)	National[2] Population Ratio (1980)	Population Equity Value[3] ($M)	Population Value Expenditure Ratio	National[4] GDP Ratio (1980)	GDP[5] Equity Value ($M)	GDP Value Expenditure Ratio
Nfld	29	.0235	39	0.74	.0129	21	1.38
PEI	4	.0051	8	0.50	.0028	5	0.80
NS	100	.0352	58	1.72	.0207	34	2.94
NB	33	.0289	47	0.70	.0164	27	1.22
Que	201	.2656	436	0.46	.2293	376	0.53
Ont	385	.3564	584	0.66	.3742	614	0.63
Man	82	.0426	70	1.17	.0369	61	1.34
SASK	42	.0399	65	0.65	.0432	71	0.59
Alta	106	.0890	146	0.73	.1380	226	0.47
BC	150	.1109	182	0.82	.1223	201	0.75
NCR	508	-	-	-	-	-	-
Ont & NCR	893	.3564	584	1.53	.3742	614	1.45
TOTAL	1640						
SASK SHORTFALL			23			29	

[1] Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985. Total excludes unallocated funds and Yukon.
[2] Statistics Canada Daily -- June 1, 1983.
[3] "Population Equity Value" represents federal expenditure distribution if based on population proportions.
[4] Statistics Canada -- Provincial Economic Accounts. GDP at market prices.
[5] "GDP Equity Value" represents federal expenditure distribution if based on gross domestic product proportions.

Table 5
Population and GDP Federal Science Expenditure Ratios
1981-82

Region	Federal[1] Science Expenditure ($M)	National[2] Population Ratio (1981)	Population Equity Value[3] ($M)	Population Value Expenditure Ratio	National[4] GDP Ratio (1981)	GDP[5] Equity Value ($M)	GDP Value Expenditure Ratio
Nfld	31	.0233	44	0.70	.0130	25	1.24
PEI	8	.0050	9	0.89	.0027	5	1.60
NS	101	.0348	66	1.53	.0209	39	2.59
NB	37	.0286	54	0.69	.0166	31	1.19
Que	259	.2645	499	0.52	.2273	429	0.60
Ont	440	.3543	669	0.66	.3741	706	0.62
Man	107	.0422	80	1.34	.0374	71	1.51
SASK	48	.0398	75	0.64	.0432	82	0.59
Alta	119	.0919	174	0.68	.1393	263	0.45
BC	153	.1127	213	0.72	.1227	232	0.66
NCR	585	-	-	-	-	-	-
Ont & NCR	1025	.3543	668	1.53	.3741	706	1.45
TOTAL	1888						
SASK SHORTFALL			27			34	

1 Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985. Total excludes unallocated funds and Yukon.
2 Statistics Canada Daily -- June 1, 1983
3 "Population Equity Value" represents federal expenditure distribution if based on population proportions.
4 Statistics Canada -- Provincial Economic Accounts. GDP at market prices.
5 "GDP Equity Value" represents federal expenditure distribution if based on gross domestic product proportions.

Table 6
Population and GDP Federal Science Expenditure Ratios
1982-83

Region	Federal[1] Science Expenditure ($M)	National[2] Population Ratio (1982)	Population Equity Value[3] ($M)	Population Value Expenditure Ratio	National[4] GDP Ratio (1982)	GDP[5] Equity Value ($M)	GDP Value Expenditure Ratio
Nfld	46	.0231	51	0.90	.0134	29	1.59
PEI	9	.0050	11	0.82	.0028	6	1.50
NS	113	.0346	76	1.49	.0227	50	2.26
NB	47	.0284	62	0.76	.0172	38	1.24
Que	316	.2631	578	0.55	.2270	499	0.63
Ont	503	.3539	778	0.65	.3708	815	0.62
Man	126	.0420	92	1.37	.0378	83	1.52
SASK	55	.0397	87	0.63	.0416	91	0.60
Alta	110	.0941	207	0.53	.1428	314	0.35
BC	200	.1133	249	0.80	.1201	264	0.76
NCR	672	-	-	-	-	-	-
Ont & NCR	1175	.3539	778	1.51	.3708	815	1.44
TOTAL	2197						
SASK SHORTFALL			33			36	

1 Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985. Total excludes unallocated funds and Yukon.
2 Statistics Canada Daily -- June 1, 1983.
3 "Population Equity Value" represents federal expenditure distribution if based on population proportions.
4 Statistics Canada -- Provincial Economic Accounts. GDP at market prices.
5 "GDP Equity Value" represents federal expenditure distribution if based on gross domestic product proportions.

Table 7

Population and GDP Federal Science Expenditure Ratios

1983-84

Region	Federal[1] Science Expenditure ($M)	National[2] Population Ratio (1983)	Population Equity Value[3] ($M)	Population Value Expenditure Ratio	National[4] GDP Ratio (1983)	GDP[5] Equity Value ($M)	GDP Value Expenditure Ratio
Nfld	72	.0231	60	1.20	.0135	35	2.06
PEI	9	.0050	13	0.69	.0030	8	1.13
NS	159	.0345	90	1.77	.0234	61	2.61
NB	44	.0284	74	0.59	.0183	48	0.92
Que	390	.2618	684	0.57	.2249	587	0.66
Ont	581	.3543	925	0.63	.3772	985	0.59
Man	156	.0420	110	1.42	.0374	98	1.59
SASK	70	.0399	104	0.67	.0405	106	0.66
Alta	133	.0946	247	0.54	.1406	367	0.36
BC	239	.1136	297	0.80	.1175	307	0.78
NCR	758	-	-	-	-	-	-
Ont & NCR	1339	.3543	925	1.45	.3772	985	1.36
TOTAL	2611						
SASK SHORTFALL			34			36	

1 Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985. Total excludes unallocated funds and Yukon.

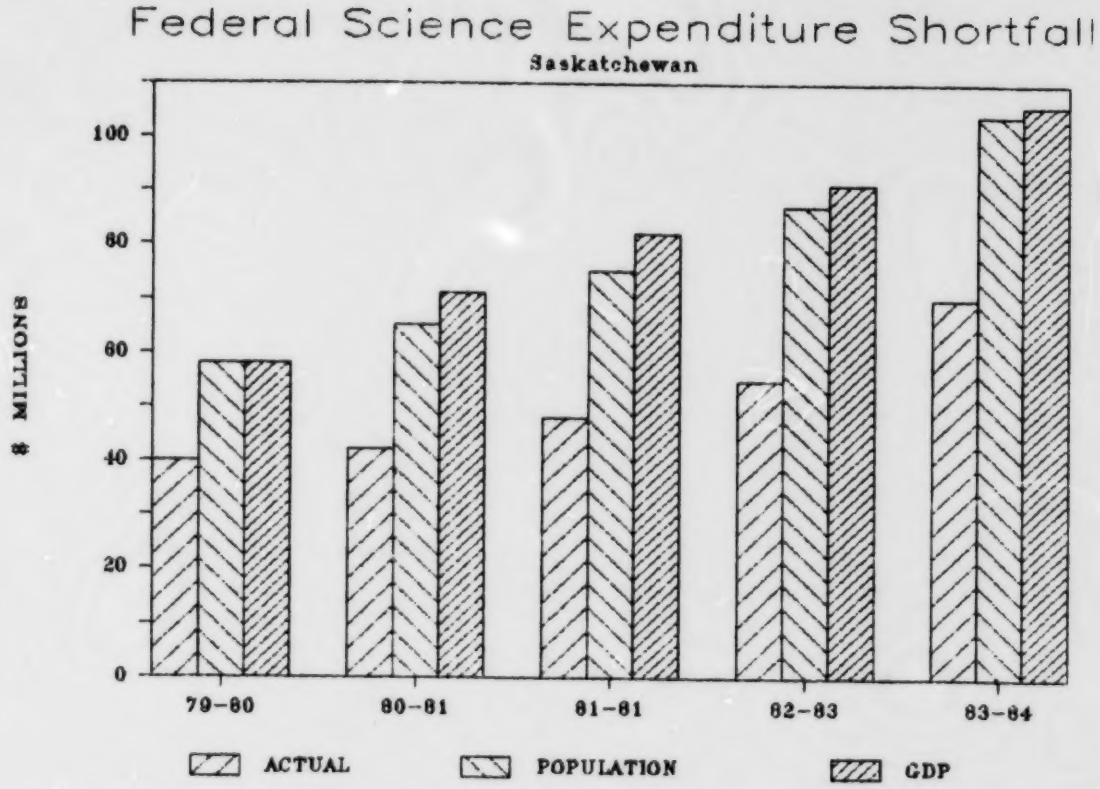
2 Statistics Canada Daily -- June 1, 1983.

3 "Population Equity Value" represents federal expenditure distribution if based on population proportions.

4 Statistics Canada -- Provincial Economic Accounts. GDP at market prices.

5 "GDP Equity Value" represents federal expenditure distribution if based on gross domestic product proportions.

Figure 3


Federal Science Expenditure Shortfall
Saskatchewan
$ MILLIONS
100
80
60
40
20
0
79-80
80-81
81-81
82-83
83-84
ACTUAL
POPULATION
GDP

METRIC

Figure 4

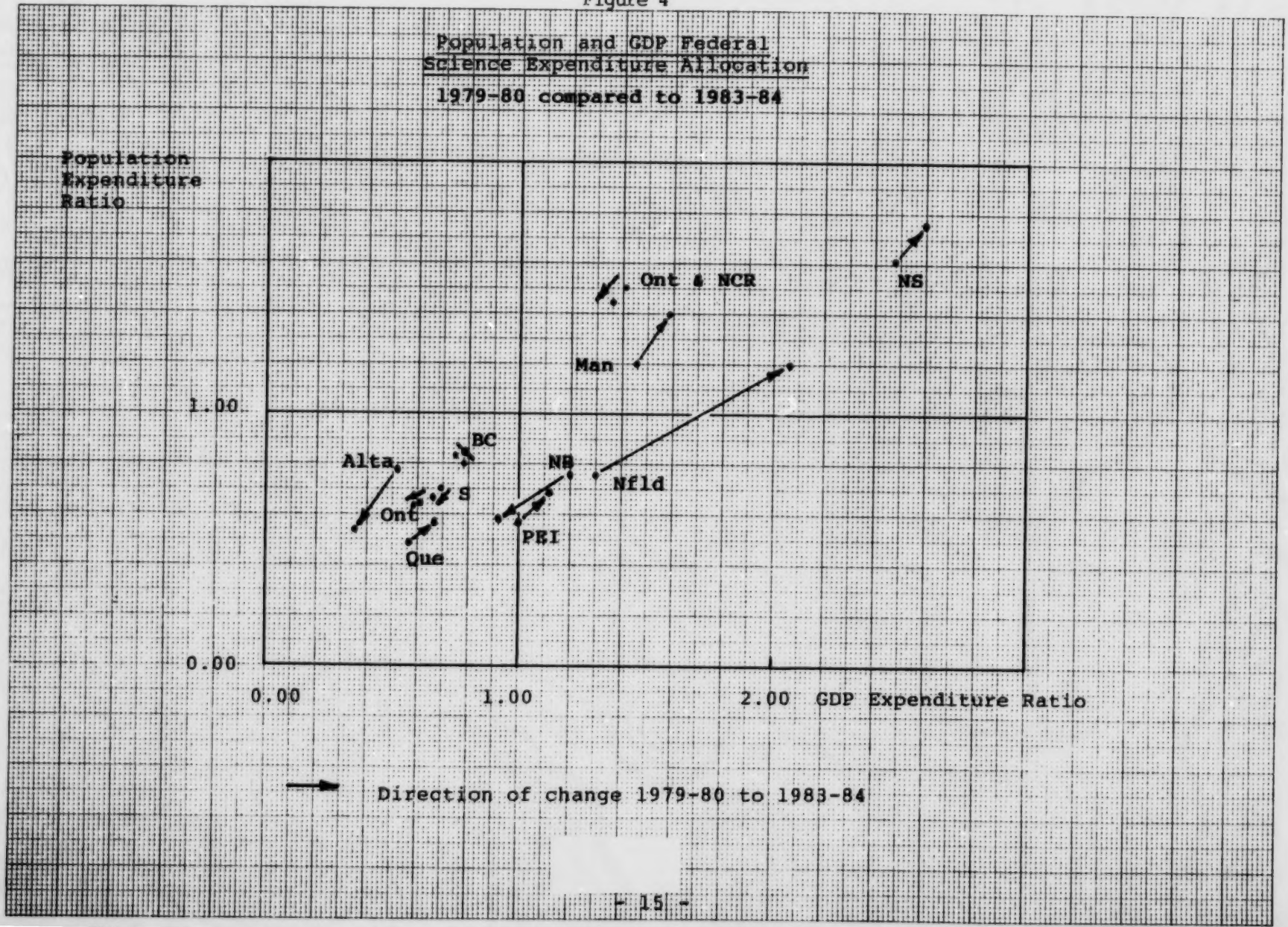


Figure 5

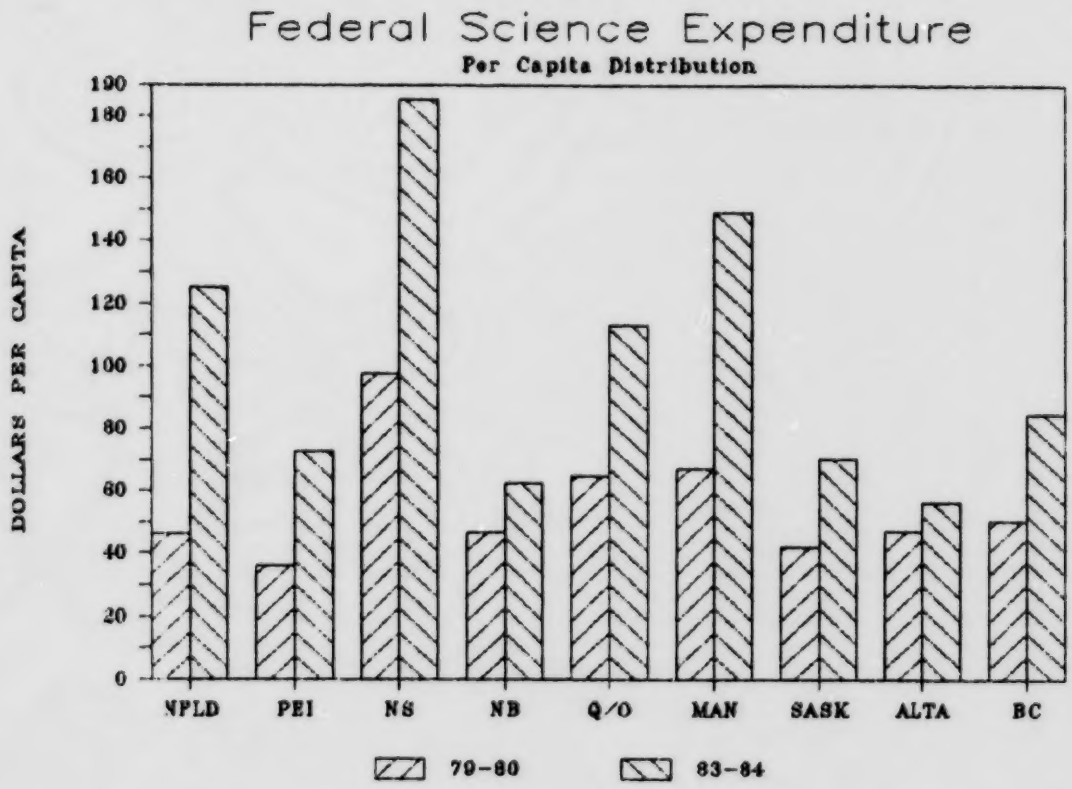

Federal Science Expenditure
Per Capita Distribution
DOLLARS PER CAPITA
0
20
40
60
80
100
120
140
160
180
190
NFLD
PEI
NS
NB
Q/O
MAN
SASK
ALTA
BC
79-80
83-84

Table 8
Federal Science Expenditure Per Capita Distribution
1979-80 to 1983-84

Region	1979-80			1980-81			1981-82			1982-83			1983-84		
	$	%	Rank	$	%	Rank	$	%	Rank	$	%	Rank	$	%	Rank
Nfld	46.19	(1.5)	7	50.67	9.7	5	55.13	8.8	6	81.57	48.0	4	124.96	53.2	3
PEI	35.95	4.7	9	35.98	0.1	9	65.32	81.5	4	73.44	12.4	5	72.64	(1.1)	6
NS	97.83	1.5	1	118.13	20.8	1	119.22	0.9	1	132.22	10.9	1	185.03	39.9	1
NB	46.82	14.5	6	47.51	1.5	7	53.04	11.6	8	67.80	27.8	7	62.27	(8.2)	8
Que/Ont	64.94	(1.7)	3	73.18	12.7	3	85.19	16.4	3	98.11	15.2	3	112.78	15.0	4
Man	67.26	(2.6)	2	79.69	18.5	2	104.72	31.4	2	121.41	15.9	2	149.10	22.8	2
SASK	42.18	32.3	8	43.53	3.2	8	49.41	13.5	9	56.08	13.5	8	70.56	25.8	7
Alta	47.31	9.5	5	49.38	4.4	6	53.06	7.5	7	47.34	(10.8)	9	56.50	19.3	9
BC	50.61	12.3	4	56.17	11.0	4	55.79	(0.7)	5	71.70	28.5	6	84.57	17.9	5

Notes: 1. These are estimates. Due to reporting procedures for the National Capital Region (NCR), Ontario and Quebec could not be separated.
2. Percent change from previous year. Brackets indicate decrease.

Source: Final intercensal estimates of population for census divisions and census metropolitan areas as of June 1, 1977 to 1981. November 1984. Postcensal estimate of population by sex and age, Canada and provinces, June 1, 1982. January 1985. Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary, May 1985.

2.0 Federal Intramural Science Expenditures

2.1 This section provides summary data on the Federal Government's intramural expenditures on Saskatchewan-based scientific establishments. Intramural expenditures are defined as the direct costs of scientific and technological activities that are managed and carried out by employees of the Federal Government or on behalf of federal departments. (Agriculture Canada Research Stations are examples of federal scientific establishments).

2.1 As with total science expenditures, Saskatchewan experienced the seventh highest cumulative growth rate (78.3%) in federal intramural science expenditures. Again, this growth lagged the national cumulative growth of 80.6% for the same period of 1979-80 to 1983-84. This five year growth declined from a 88.2% rate for the previous period of 1978-79 to 1982-83 when Saskatchewan had the second highest cumulative rate among the provinces and exceeded the national rate of 48.2%. On an annual basis, however, Saskatchewan experienced a significant improvement in 1983-84 with a 28.1% increase as compared to a 6.7% increase in 1982-83 (Table 9). This annual performance was only exceeded in 1979-80 when Environment Canada established an Inland Waters Directorate in Regina.

2.2 Federal intramural science expenditures in Saskatchewan increased from $23 million in 1979-80 to $41 million in 1983-84. Total Canadian intramural science expenditures increased from $886 million in 1979-80 to $1,600 million in 1983-84.

2.3 In 1983-84, Saskatchewan's rank in terms of federal intramural science expenditures rose to ninth place, ahead of PEI and New Brunswick, from tenth position in the previous year (Table 10). This performance lags the 1980-81 and 1981-82 achievement of eighth position, however.

2.4 Saskatchewan's proportion of federal intramural expenditures remained relatively unchanged throughout the five year period at 2.6% with a slight dip in 1982-83 to 2.4%.

2.5 As with total science expenditures, the National Capital Region receives the largest proportionate share of intramural science expenditures. This high share (more than 40%) is primarily attributable to the centralization of federal scientific laboratories and facilities (Figure 6). The Western provinces have increased their share in 1983-84 to 22.8% from 21.2% in the previous year.

2.6 The Saskatchewan intramural science expenditure shortfall has increased for both population and gross domestic product from $12 and $13 million in 1979-80 to $23 and $24 million in 1983-84 (Table 11 and Figure 7). The intramural shortfall accounted for about two-thirds of Saskatchewan's total federal science expenditure shortfall in 1983-84.

2.7 On a regional basis, the western provinces (excluding Manitoba) and Quebec and Ontario (excluding the National Capital Region) receive a disproportionate share of federal intramural funding (Figure 8). New Brunswick experienced a significant directional change in 1983-84.

2.8 Saskatchewan's per capita federal intramural science expenditure of $41.33 ranked seventh in 1983-84, unchanged since 1980-81 when the province ranked sixth (Table 12 and Figure 9). This is an improvement, however, from eighth position in 1979-80 ($24.18).

2.9 There are four federal departments which have established scientific facilities in Saskatchewan: Agriculture; Energy, Mines and Resources; Environment and the National Research Council. Federal intramural science expenditures increased in 1983-84 primarily as a result of NRC's expansion of its National Plant Biotechnology Centre in Saskatoon. Further increases are expected in later

fiscal years as a result of Environment Canada's establishment of a National Hydrology Research Centre in Saskatoon. Both Environment Canada (85.7%) and the NRC (42.9%) experienced significant increases in intramural expenditures in 1983-84, whereas Energy, Mines and Resources reported nil expenditures (Table 13 and Figures 10 and 11).

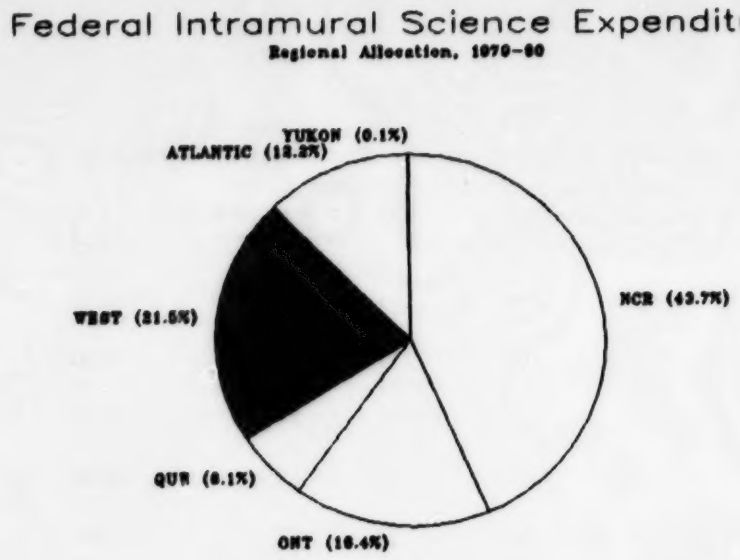
Table 9
Federal Intramural Science Expenditure Growth
1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	$M	%	$M	%	$M	%	$M	%	$M	%
Nfld	16	-	17	6.3	20	17.6	34	70.0	55	61.8
PEI	3	-	3	-	5	66.7	5	-	6	20.0
NS	66	15.8	67	1.5	68	1.5	84	23.5	126	50.0
NB	24	14.3	25	4.2	28	12.0	34	21.4	24	(29.4)
Que	54	(15.6)	59	9.3	76	28.8	98	28.9	120	22.4
Ont	145	(13.2)	166	14.5	196	18.1	209	6.6	245	17.2
Man	53	(1.9)	60	13.2	81	35.0	96	18.5	120	25.0
SASK	23	35.3	26	13.0	30	15.4	32	6.7	41	28.1
Alta	44	(2.2)	49	11.4	55	12.2	64	16.4	76	18.8
BC	70	14.8	72	2.9	74	2.8	88	18.9	126	43.2
NCR	387	(1.0)	444	14.7	520	17.1	583	12.2	660	13.2
TOTAL	886	(1.1)	990	11.7	1153	16.5	1328	15.2	1600	20.5

Notes: 1. Components do not add to total due to the exclusion of Yukon and NWT.
2. NCR refers to National Capital Region and includes Ottawa and Hull.
3. Brackets indicate a decrease.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary, May 1985.

Figure 6


Federal Intramural Science Expenditure
Regional Allocation, 1979-80
YUKON (0.1%)
ATLANTIC (13.2%)
NCR (43.7%)
WEST (21.5%)
QUE (8.1%)
ONT (13.4%)

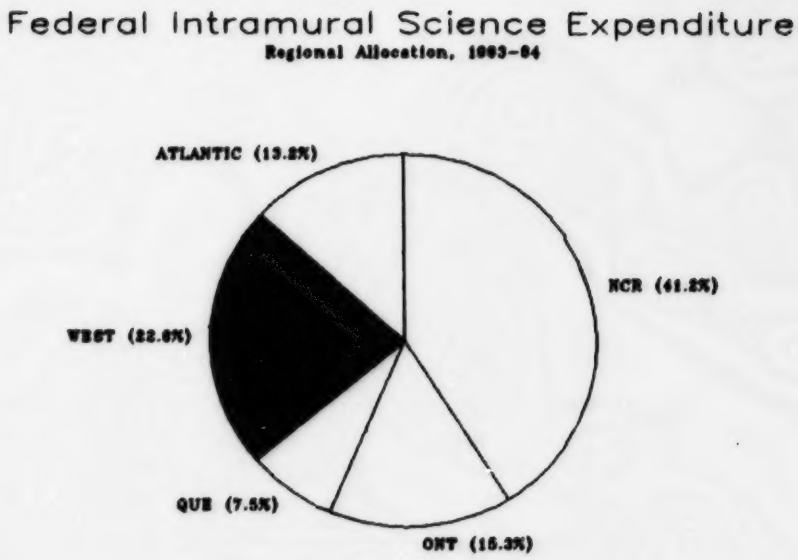

Federal Intramural Science Expenditure
Regional Allocation, 1983-84
ATLANTIC (13.2%)
NCR (41.2%)
WEST (22.6%)
QUE (7.5%)
ONT (15.3%)

Table 10

Federal Intramural Science Expenditure Regional Allocation and Ranking

1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Nfld	1.8	10	1.7	10	1.7	10	2.6	8	3.4	8
PEI	0.3	11	0.3	11	0.4	11	0.4	11	0.4	11
NS	7.4	4	6.8	4	5.9	6	6.3	6	7.9	3
NB	2.7	8	2.5	9	2.4	9	2.6	8	1.5	10
Que	6.1	5	6.0	6	6.6	4	7.4	3	7.5	5
Ont	16.4	2	16.8	2	17.0	2	15.7	2	15.3	2
Man	6.0	6	6.1	5	7.0	3	7.2	4	7.5	5
SASK	2.6	9	2.6	8	2.6	8	2.4	10	2.6	9
Alta	5.0	7	5.0	7	4.8	7	4.8	7	4.8	7
BC	7.9	3	7.3	3	6.4	5	6.8	5	7.9	3
NCR	43.7	1	45.0	1	45.1	1	43.9	1	41.2	1
TOTAL	100.0		100.0		100.0		100.0		100.0	

Notes: 1. Components may not add to total due to the exclusion of Yukon and NWT.
2. NCR refers to National Capital Region and includes Ottawa and Hull.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary, May 1985.

Figure 7

Federal Intramural Science Expenditure

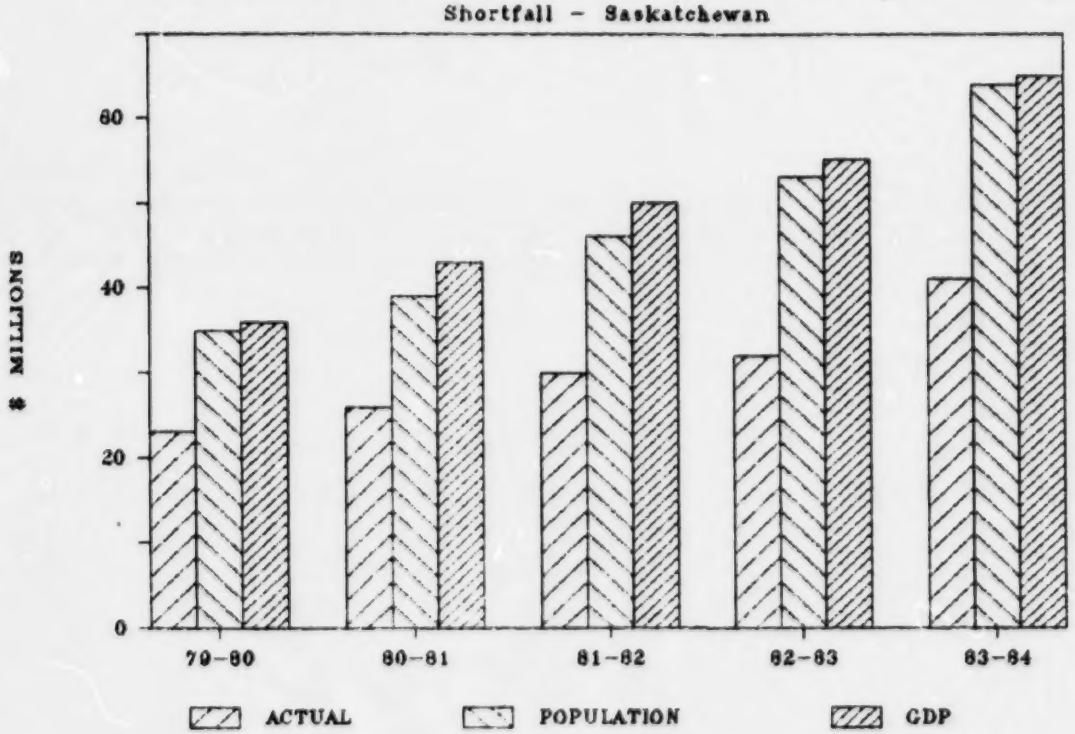


Table 11

Population and GDP Federal Intramural Science Expenditure Ratios
1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	Pop.	GDP	Pop.	GDP	Pop.	GDP	Pop.	GDP	Pop.	GDP
Nfld	0.76	1.33	0.74	1.31	0.74	1.33	1.10	1.89	1.49	2.50
PEI	0.60	1.50	0.60	1.00	0.83	1.67	0.71	1.25	0.75	1.20
NS	2.13	3.30	1.91	3.35	1.70	2.83	1.83	2.80	2.29	3.41
NB	0.92	1.33	0.86	1.56	0.85	1.47	0.89	1.48	0.53	0.83
Que	0.23	0.26	0.23	0.26	0.25	0.29	0.28	0.33	0.29	0.33
Ont	0.46	0.43	0.47	0.45	0.48	0.45	0.44	0.42	0.43	0.41
Man	1.39	1.56	1.43	1.62	1.65	1.88	1.71	1.92	1.79	2.00
SASK	**0.66**	**0.64**	**0.67**	**0.60**	**0.65**	**0.60**	**0.60**	**0.58**	**0.64**	**0.63**
Alta	0.58	0.39	0.56	0.36	0.52	0.34	0.51	0.34	0.50	0.34
BC	0.73	0.65	0.65	0.60	0.57	0.52	0.59	0.55	0.69	0.67
Ont & NCR	1.68	1.59	1.73	1.65	1.75	1.66	1.69	1.61	1.60	1.50
SASK SHORTFALL ($M)	12	13	13	17	16	20	21	23	23	24
% CHANGE	(36.8)	(36.6)	8.3	30.8	23.1	17.6	31.3	15.0	9.5	4.3

Note: Population and GDP expenditure ratios represent relationship between actual federal intramural expenditures and federal intramural expenditure distribution if based on population and gross domestic product proportions.

METRIC

Figure 8

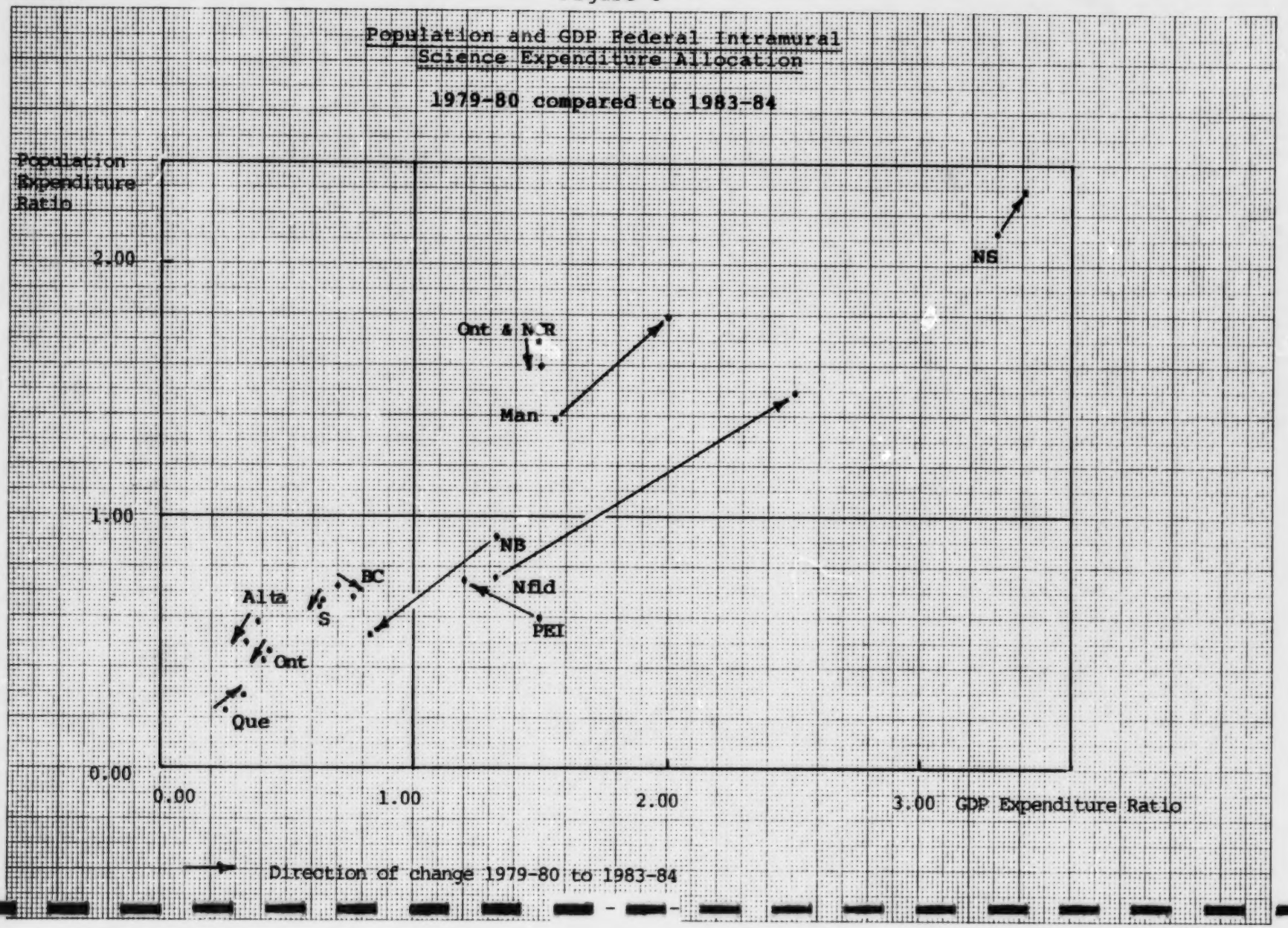


Figure 9

Federal Intramural Science Expenditure

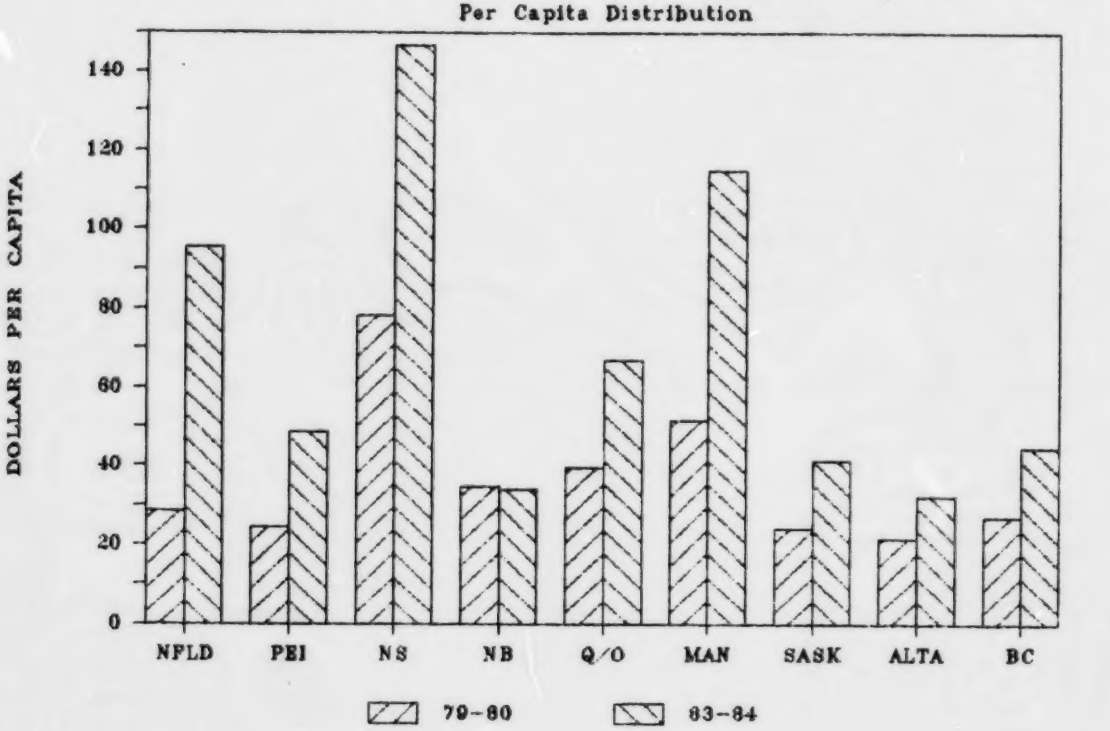


Table 12
Federal Intramural Science Expenditure
Per Capita Distribution
1979-80 to 1983-84

Region	1979-80			1980-81			1981-82			1982-83			1983-84		
	$	%	Rank	$	%	Rank	$	%	Rank	$	%	Rank	$	%	Rank
Nfld	28.39	(0.4)	5	30.06	5.9	5	35.23	17.2	6	59.73	69.5	3	95.45	59.8	3
PEI	24.59	(0.8)	7	24.43	(0.7)	8	40.82	67.1	4	40.72	(0.2)	6	48.43	18.9	5
NS	78.40	15.2	1	79.28	1.1	1	80.25	1.2	1	98.56	22.8	1	146.63	48.8	1
NB	34.69	13.7	4	35.95	3.6	4	40.21	11.8	5	48.63	20.9	5	33.97	(30.1)	8
Que/Ont	39.49	(6.4)	3	44.73	13.3	3	52.58	17.5	3	58.56	11.4	4	66.86	14.2	4
Man	51.56	(1.5)	2	58.54	13.5	2	78.93	34.8	2	92.74	17.5	2	114.69	23.7	2
SASK	24.18	34.2	8	27.10	12.1	6	30.98	14.3	7	32.67	5.5	7	41.33	26.5	7
Alta	21.43	(5.6)	9	22.89	6.8	9	24.58	7.4	9	27.62	12.4	9	32.29	16.9	9
BC	27.03	12.7	6	27.01	(0.1)	7	26.97	(0.1)	8	31.54	16.9	8	44.59	41.4	6

Notes: 1. These are estimates. Due to reporting procedures for the National Capital Region (NRC), Ontario and Quebec could not be separated.

2. Brackets indicate a decrease.

Source: Final intercensal estimates of population for census divisions and census metropolitan areas as of June 1, 1977 to 1981. November 1984. Postcensal estimate of population by sex and age, Canada and provinces, June 1, 1982. January 1985. Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985.

Table 13
Federal Intramural Science Expenditures in
Saskatchewan by Federal Department or Agency
1979-80 to 1983-84

Department	1979-80		1980-81		1981-82		1982-83		1983-84	
	$M	%	$M	%	$M	%	$M	%	$M	%
Agriculture	11	10.0	13	18.2	15	15.4	17	13.3	18	5.9
Energy, Mines & Resources	1	-	1	-	1	-	1	-	-	-
Environment	7	600.0	7	-	6	(14.3)	7	16.7	13	85.7
NRC	4	(20.0)	5	25.0	8	60.0	7	(12.5)	10	42.9
TOTAL	23	35.3	26	13.0	30	15.4	32	6.7	41	28.1

Source: Statistics Canada. Listing of Federal Scientific Establishments, 1979-80, 1980-81, 1981-82, 1982-83, and 1983-84.

Figure 10

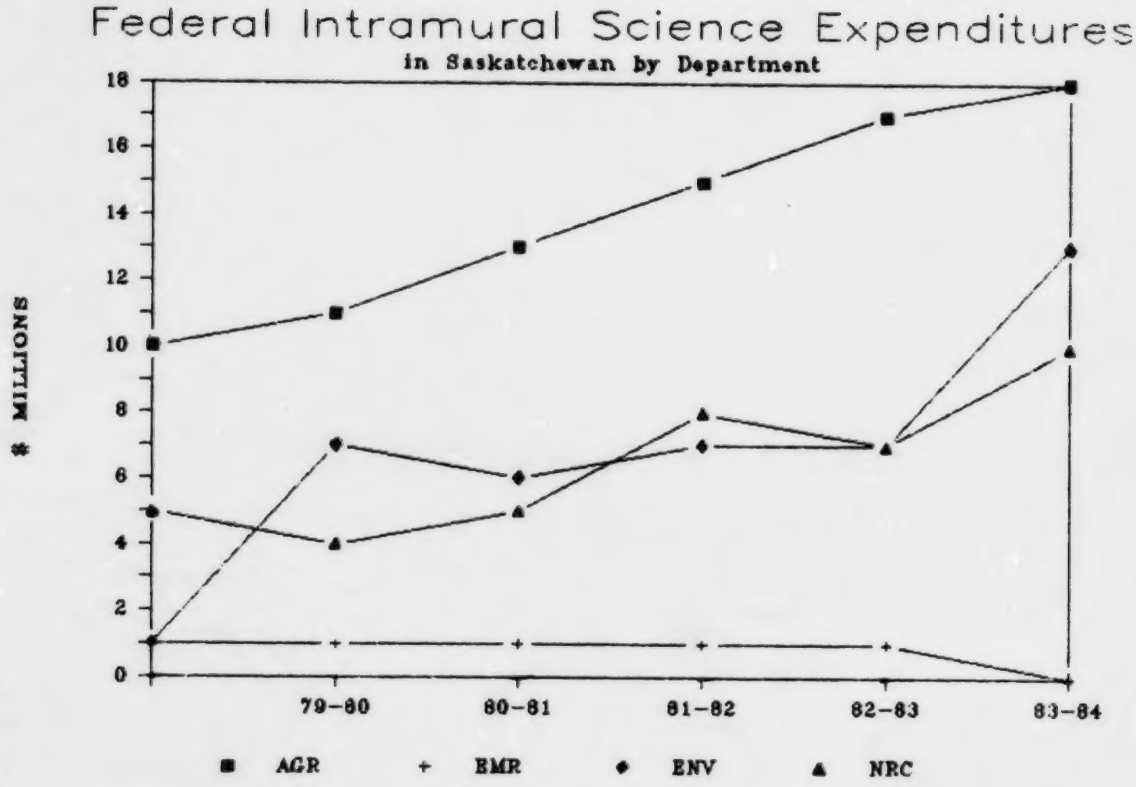
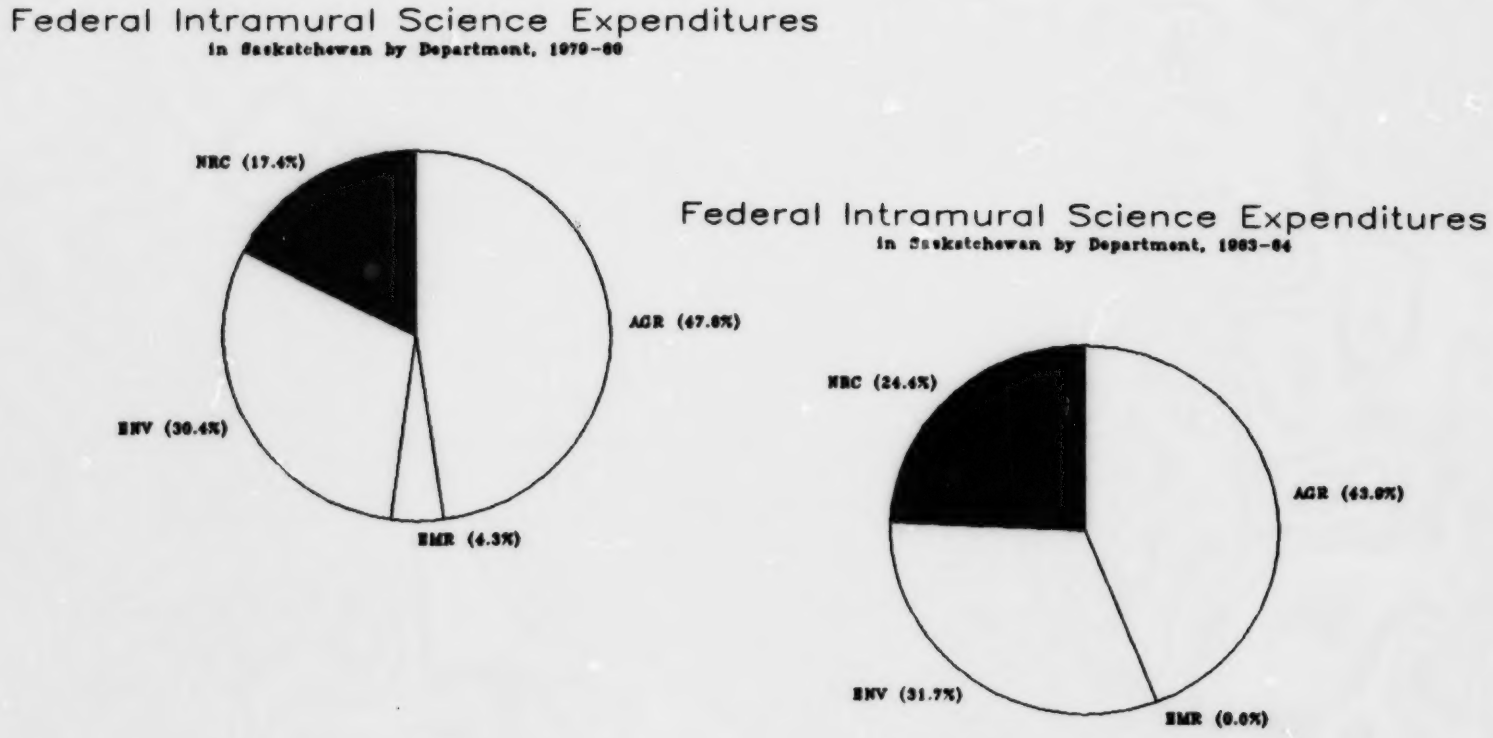

Federal Intramural Science Expenditures
in Saskatchewan by Department
$ MILLIONS
18
16
14
12
10
8
6
4
2
0
79-80
80-81
81-82
82-83
83-84
AGR
EMR
ENV
NRC

Figure 11


Federal Intramural Science Expenditures
in Saskatchewan by Department, 1979-80
NRC (17.4%)
AGR (47.8%)
ENV (30.4%)
EMR (4.3%)
Federal Intramural Science Expenditures
in Saskatchewan by Department, 1983-84
NRC (24.4%)
AGR (43.9%)
ENV (31.7%)
EMR (0.0%)

3.0 Federal Extramural Science Expenditures

3.1 This section provides summary data on the Federal Government's extramural expenditures for scientific activity, with emphasis on Saskatchewan's share of support. Federal extramural expenditures are defined as expenditures for scientific and technological activities that are managed and carried out by a non-federal organization, that is, the federal government is the funder but not the performer of the activity. Sources of federal funds for extramural activity include federal departments, the granting councils and other federal agencies.

3.2 In terms of cumulative growth for the period 1979-80 to 1983-84, Saskatchewan's rate of 70.6% was the ninth highest among the provinces. This rate lagged the national cumulative growth of 73.4% and the previous period's rate of 76.9% (1978-79 to 1982-83) where Saskatchewan had the fifth highest rate. On an annual basis, Saskatchewan experienced a negative growth in 1980-81 but experienced positive growth in the other fiscal years (Table 14).

3.3 Federal extramural science expenditures in Saskatchewan increased from $17 million in 1979-80 to $29 million in 1983-84. Total federal extramural science expenditures increased from $646 million in 1979-80 to $1,120 million in 1983-84.

3.4 Saskatchewan's rank in terms of federal extramural expenditures declined to eighth in 1980-81 from sixth in the previous year and remained unchanged thereafter (Table 15).

3.5 Saskatchewan's proportion of federal extramural science expenditures fluctuated over the five year period from a high of 2.6% in 1979-80 and 1983-84 to a low of 2.1% in 1980-81. The province's share increased steadily from 1980-81 to 2.6% in 1983-84. Saskatchewan's intramural and extramural share were the same in 1983-84.

3.6 The National Capital Region has a significantly lower extramural allocation than intramural with an 8.8% extramural share in 1983-84 as compared to a 41.2% intramural share. The Western provinces' share declined during the period from 22.7% to 21.0%.

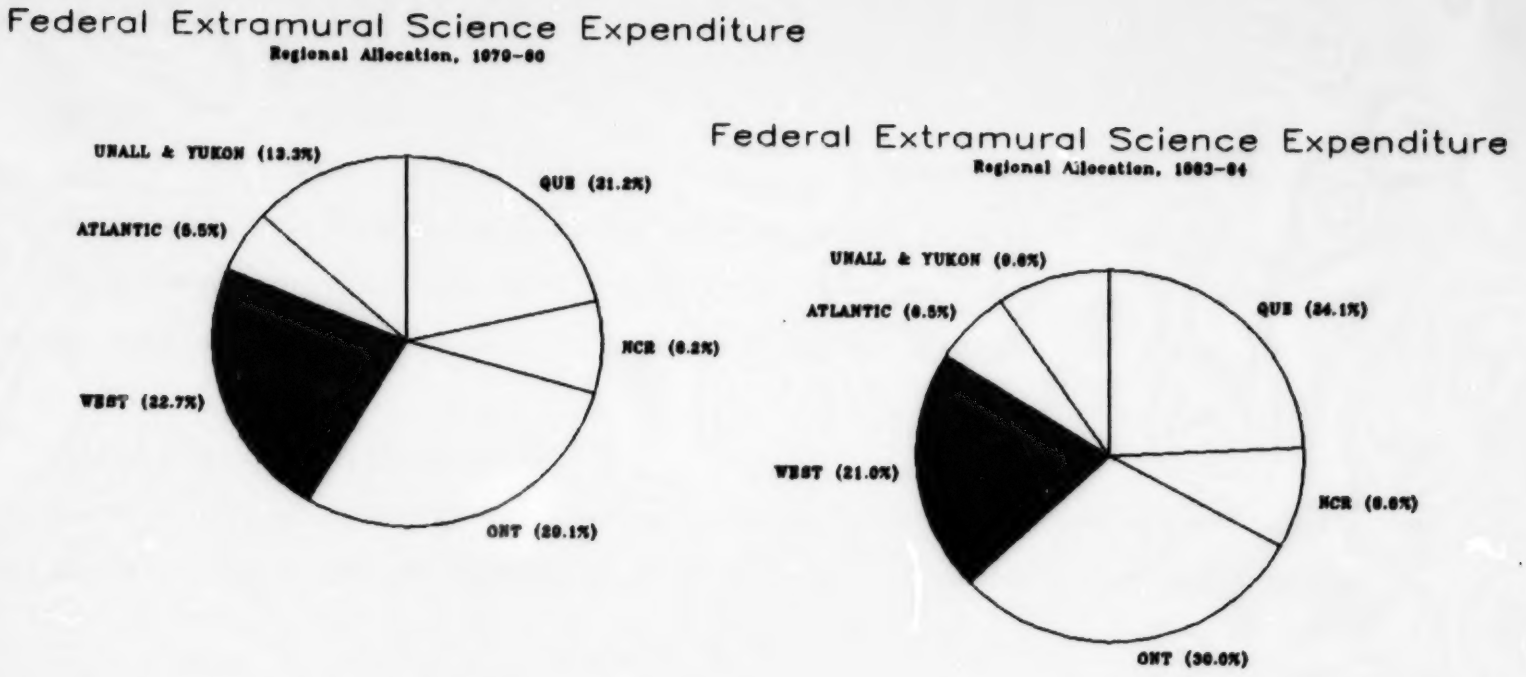
3.7 Saskatchewan's share of federal extramural science expenditures based on population and gross domestic product proportions consistently ran in a deficit position. The shortfalls increased slightly from $5 and $6 million in 1979-80 to $7 and $8 million respectively in 1983-84 based on population and GDP (Table 16 and Figure 13). The 1983-84 shortfalls, however, are a reversal of the upward trend which had been experienced during the previous four years.

3.8 Saskatchewan's position in terms of federal extramural science expenditure population and gross domestic product expenditure ratios (actual expenditures divided by anticipated expenditures) remained relatively unchanged since 1979-80. Several other provinces, however, experienced significant changes in their relative positions (eg. PEI and Alberta) (Figure 14).

3.9 Federal extramural per capita expenditures in Saskatchewan increased from $18.00 in 1979-80 to $28.97 in 1983-84. Saskatchewan's position among the provinces decreased to sixth from fifth in 1979-80 (Table 17 and Figure 15).

3.10 The university sector is the major performer of federal extramural scientific activity in Saskatchewan with an increased share from 50.3% in 1979-80 to 61.7% in 1983-84. The business sector experienced a decline in share from 19.9% in 1979-80 to 14.6% in 1983-84 as did the other Canadian sector which decreased from 28.7% to 22.3%. Non-profit institutions play a minor role (Tables 18 to 22 and Figure 16).

Figure 12



Note: UNALL means unallocated; NCR refers to National Capital Region.

Table 14

Federal Extramural Science Expenditure Growth

1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	$M	%	$M	%	$M	%	$M	%	$M	%
Nfld	10	-	12	20.0	11	(8.3)	12	9.1	17	41.7
PEI	1	-	1	-	3	200.0	4	33.3	3	(25.0)
NS	16	(33.3)	33	106.3	33	-	29	(12.1)	33	13.8
NB	8	14.3	8	-	9	12.5	13	44.4	20	53.8
Que	137	13.2	142	3.6	183	28.9	218	19.1	270	23.8
Ont	188	2.7	219	16.5	244	11.4	294	20.5	336	14.3
Man	16	11.1	22	37.5	26	18.2	30	15.4	36	20.0
SASK	17	30.8	16	(5.9)	18	12.5	23	27.8	29	26.1
Alta	53	29.3	57	7.5	64	12.3	46	28.1	57	23.9
BC	61	13.0	78	27.9	79	1.3	112	41.8	113	0.9
NCR	53	10.4	64	20.8	65	1.6	89	10.1	98	10.1
TOTAL	646	6.3	753	16.6	817	8.5	1014	24.1	1120	10.5

Notes:
1. Components do not add to total due to the exclusion of unallocated funds and Yukon.
2. NCR refers to National Capital Region and includes Hull and Ottawa.
3. Brackets indicate a decrease.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985.

Table 15
Federal Extramural Science Expenditure Regional Allocation and Ranking
1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Nfld	1.6	9	1.6	9	1.4	9	1.2	10	1.5	10
PEI	0.2	11	0.1	11	0.4	11	0.4	11	0.3	11
NS	2.5	7	4.4	6	4.0	6	2.9	7	2.9	7
NB	1.2	10	1.1	10	1.1	10	1.3	9	1.8	9
Que	21.2	2	18.9	2	22.4	2	21.5	2	24.1	2
Ont	29.1	1	29.1	1	29.9	1	29.0	1	30.0	1
Man	2.5	7	3.0	7	3.2	7	3.0	6	3.2	6
SASK	2.6	6	2.1	8	2.2	8	2.3	8	2.6	8
Alta	8.2	4	7.6	5	7.8	5	4.5	5	5.1	5
BC	9.4	3	10.4	3	9.7	4	11.1	3	10.1	3
NCR	8.2	4	8.5	4	10.0	3	8.8	4	8.8	4
TOTAL	100.0		100.0		100.0		100.0		100.0	

Notes: 1. Components do not add to total due to the exclusion of unallocated funds and Yukon.
2. NCR refers to National Capital Region and includes Hull and Ottawa

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985.

Table 16

Population and GDP Federal Extramural Science Expenditure Ratios

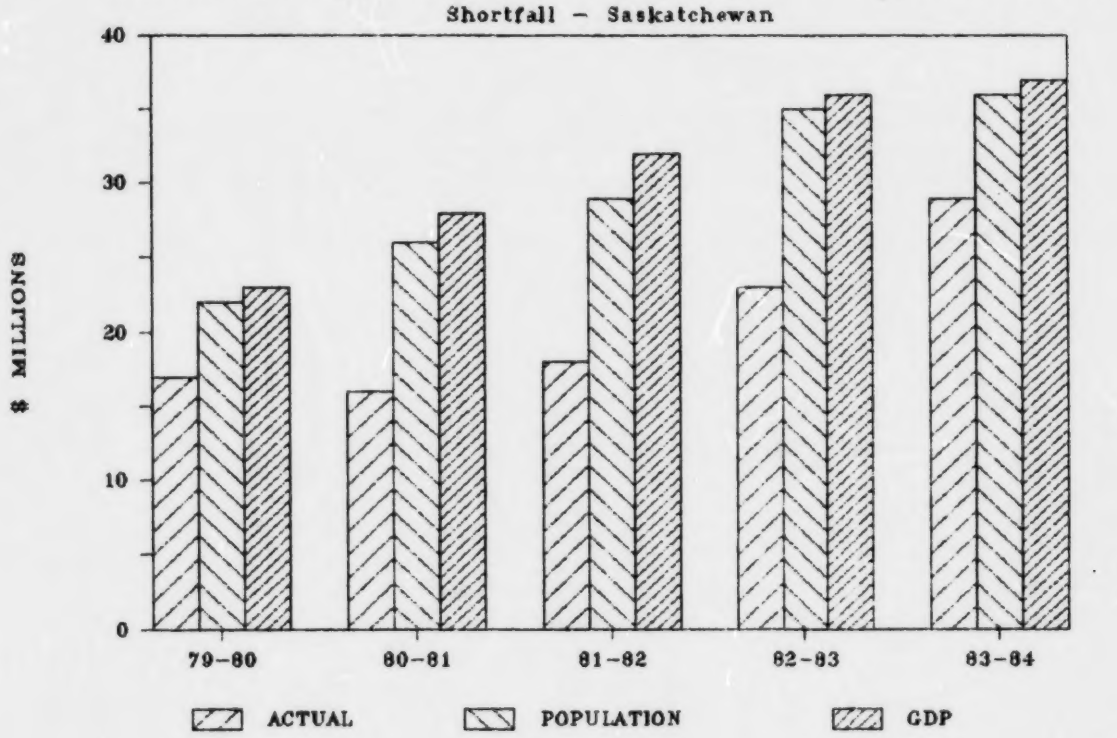
1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	Pop.	GDP	Pop.	GDP	Pop.	GDP	Pop.	GDP	Pop.	GDP
Nfld	0.77	1.25	0.80	1.50	0.65	1.10	0.60	1.00	0.81	1.42
PEI	0.33	0.50	0.33	0.50	0.75	1.50	1.00	2.00	0.60	1.00
NS	0.80	1.23	1.43	2.36	1.27	2.20	0.97	1.45	1.03	1.57
NB	0.50	0.73	0.42	0.73	0.43	0.75	0.52	0.87	0.77	1.18
Que	0.92	1.06	0.82	0.95	0.94	1.10	0.95	1.11	1.13	1.31
Ont	0.94	1.13	1.05	1.00	0.94	0.89	0.95	0.91	1.04	0.97
Man	0.67	0.76	0.79	0.92	0.84	0.96	0.81	0.91	0.95	1.06
SASK	**0.77**	**0.74**	**0.62**	**0.57**	**0.62**	**0.56**	**0.66**	**0.64**	**0.81**	**0.78**
Alta	1.10	0.75	0.98	0.63	0.96	0.63	0.56	0.37	0.66	0.44
BC	1.00	0.90	1.08	0.98	0.95	0.88	1.13	1.07	1.09	1.06
Ont & NCR	1.21	1.14	1.32	1.26	1.19	1.12	1.24	1.19	1.34	1.26
SASK SHORTFALL ($M)	5	6	10	12	11	14	12	13	7	8
% CHANGE	(37.5)	(25.0)	100.0	100.0	10.0	16.7	9.1	(7.1)	(41.7)	(38.5)

Note: Population and GDP expenditure ratios represent relationship between actual federal extramural expenditures and federal extramural expenditure distribution if based on population and gross domestic product proportions.

Figure 13

Federal Extramual Science Expenditure



METRIC

Figure 14

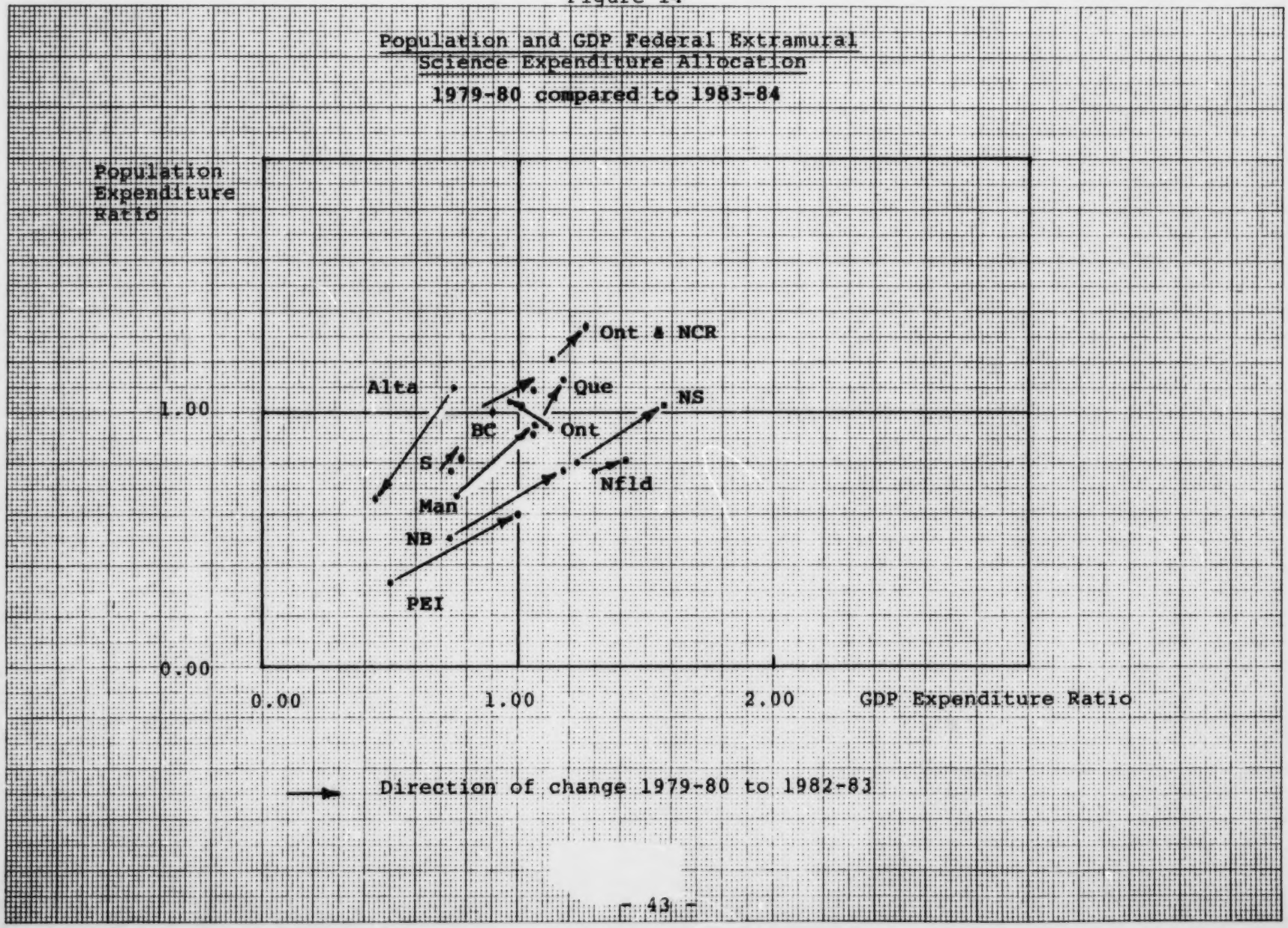


Figure 15

Federal Extramural Science Expenditure

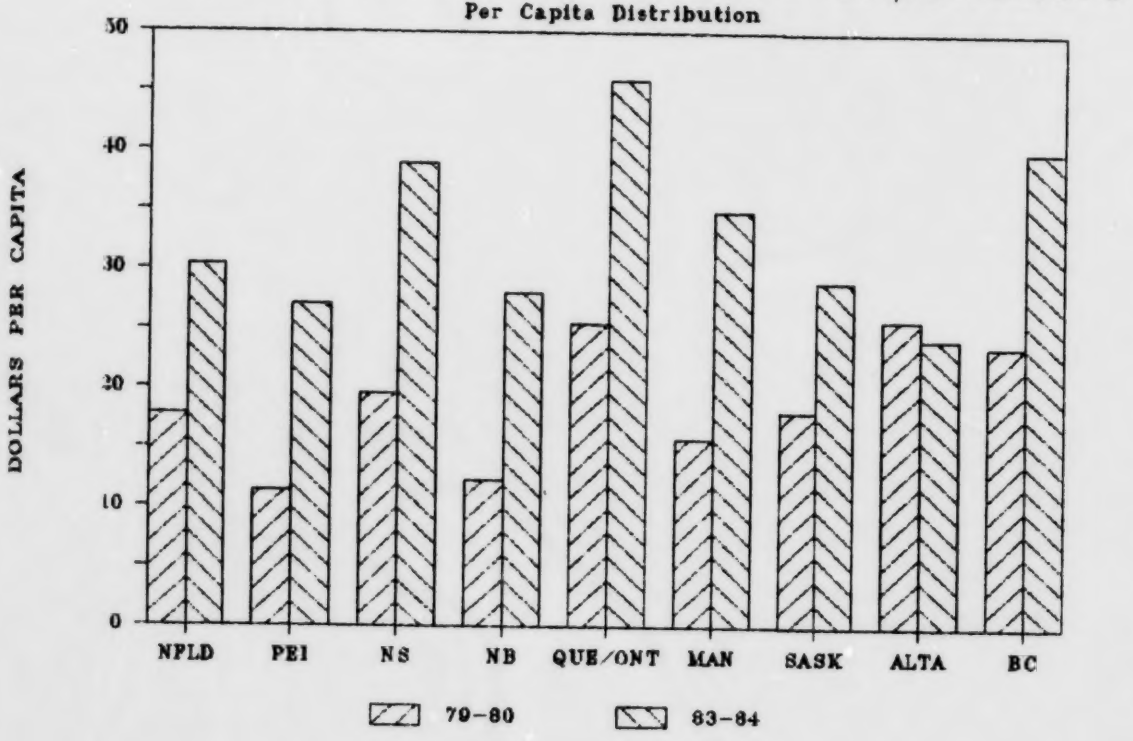


Table 17
Federal Extramural Science Expenditure Per Capita Distribution
1979-80 to 1983-84

Region	1979-80			1980-81			1981-82			1982-83			1983-84		
	$	%	Rank	$	%	Rank	$	%	Rank	$	%	Rank	$	%	Rank
Nfld	17.80	(3.3)	6	20.61	15.8	6	19.90	(3.4)	7	21.84	9.7	7	30.31	38.8	5
PEI	11.36	19.1	9	11.55	1.7	9	24.51	112.2	6	32.73	33.5	4	27.03	(17.4)	8
NS	19.43	(31.3)	4	38.85	99.9	1	38.98	0.3	1	33.66	(13.6)	3	38.91	15.6	3
NB	12.13	16.9	8	11.56	(4.7)	8	12.83	11.0	9	19.16	49.3	9	28.01	46.2	7
Que/Ont	25.45	6.6	2	28.45	11.8	3	32.61	14.6	2	39.56	21.3	2	45.91	16.1	1
Man	15.70	(7.4)	7	21.15	34.7	5	25.79	21.9	5	28.68	11.2	5	34.80	21.3	4
SASK	18.00	29.9	5	16.43	(8.7)	7	18.43	12.2	8	23.41	27.0	6	28.97	23.8	6
Alta	25.87	26.1	1	26.49	2.4	4	28.48	7.5	4	19.72	(30.8)	8	24.18	22.6	9
BC	23.58	12.0	3	29.17	23.7	2	28.83	(1.2)	3	40.16	39.3	1	39.96	(0.5)	2

Notes: 1. These are estimates. Due to reporting procedures for the National Capital Region (NCR), Ontario and Quebec could not be separated.
2. Percent change from previous year. Brackets indicate a decrease..

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985. Final intercensal estimates of population for census divisions and census metropolitan areas as of June 1, 1977 to 1981. November 1984. Postcensal estimate of population by sex and age, Canada and Provinces, June 1, 1982. January 1985.

Table 18
Federal Extramural Payments to Performing Sectors for Scientific Activities
1979-80

Region	Business		University		Non-Profit		Other Canadian		Total
	$M	%	$M	%	$M	%	$M	%	$M
Nfld	1.8	18.0	5.4	54.0	0.1	0.1	2.7	27.0	10.0
PEI	0.7	53.8	0.1	7.7	0.1	7.7	0.4	30.8	1.3
NS	3.9	23.8	9.5	57.9	0.5	3.0	2.5	15.2	16.4
NB	2.9	34.5	3.4	40.5	0.6	7.1	1.5	17.9	8.4
Que	68.9	50.3	59.1	43.2	6.5	4.7	2.4	1.8	136.9
Ont	90.3	48.0	89.0	47.3	3.5	1.9	5.4	2.9	188.2
Man	2.5	15.5	11.7	72.7	0.7	4.3	1.2	7.5	16.1
SASK	3.4	19.9	8.6	50.3	0.2	1.2	4.9	28.7	17.1
Alta	8.6	16.2	18.6	35.0	0.4	0.8	25.5	48.0	53.1
BC	20.1	33.0	35.3	57.9	3.1	5.1	2.5	4.1	61.0
NCR	34.4	65.5	9.1	17.3	5.4	10.3	3.6	6.9	52.5
TOTAL	263.8	44.0	259.0	43.2	22.7	3.8	54.7	9.1	600.2

Notes: 1. Components do not add to total due exclusion of unallocated funds, NWT and Yukon and due to rounding.
2. NCR refers to National Capital Region and includes Hull and Ottawa.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary, May 1985.

Table 19
Federal Extramural Payments to Performing Sectors for Scientific Activities
1980-81

Region	Business		University		Non-Profit		Other Canadian		Total
	$M	%	$M	%	$M	%	$M	%	$M
Nfld	3.0	25.6	5.2	44.4	0.2	1.7	3.3	28.2	11.7
PEI	0.9	64.3	0.2	14.3	-	-	0.3	21.4	1.4
NS	18.3	55.8	11.5	35.1	0.2	0.6	2.8	8.5	32.8
NB	1.5	18.8	4.2	52.5	0.2	0.3	2.1	26.3	8.0
Que	65.2	45.9	70.1	49.3	4.0	2.8	2.9	2.0	142.2
Ont	98.9	45.2	107.7	49.2	3.3	1.5	8.9	4.1	218.8
Man	4.5	20.8	14.3	66.2	0.6	2.8	2.2	10.2	21.6
SASK	4.2	26.8	9.1	58.0	-	-	2.4	15.2	15.7
Alta	7.5	13.2	23.3	41.1	0.2	0.4	25.7	45.3	56.7
BC	26.0	33.4	44.0	56.6	2.7	3.5	5.1	6.6	77.8
NCR	43.4	67.3	12.2	18.9	6.0	9.3	2.9	4.5	64.5
TOTAL	300.6	42.9	313.6	44.8	20.6	2.9	65.8	9.4	700.7

Notes: 1. Components do not add to total due to exclusion of unallocated funds, NWT and Yukon and due to rounding.
2. NCR refers to National Capital Region and includes Hull and Ottawa.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary, May 1985.

Table 20
Federal Extramural Payments to Performing Sectors for Scientific Activities
1981-82

Region	Business		University		Non-Profit		Other Canadian		Total
	$M	%	$M	%	$M	%	$M	%	$M
Nfld	1.7	15.0	6.6	58.4	0.2	1.8	2.8	24.8	11.3
PEI	0.9	30.0	0.2	6.7	0.7	23.3	1.2	40.0	3.0
NS	16.5	50.0	14.2	43.0	0.2	0.6	2.1	6.4	33.0
NB	0.9	10.1	5.5	61.8	0.3	3.4	2.2	24.7	8.9
Que	85.6	46.8	91.1	49.8	3.2	1.7	3.0	1.6	182.9
Ont	93.6	38.4	138.1	56.7	3.5	1.4	8.5	3.5	243.7
Man	6.4	24.2	17.0	64.4	0.7	2.7	2.3	8.7	26.4
SASK	3.8	21.3	11.9	66.9	-	-	2.1	11.8	17.8
Alta	7.7	12.1	30.0	47.1	0.1	0.2	25.9	40.6	63.7
BC	20.3	25.7	53.7	67.9	0.7	0.9	4.4	5.5	79.1
NCR	40.7	62.9	15.4	23.8	7.1	11.0	1.5	2.3	64.7
TOTAL	316.0	40.6	385.5	49.6	18.4	2.4	58.0	7.4	777.8

Notes: 1. Components do not add to total due to exclusion of unallocated funds and Yukon and due to rounding.
2. NCR refers to National Capital Region and includes Hull and Ottawa.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary, May 1985.

Table 21

Federal Extramural Payments to Performing Sectors for Scientific Activities
1982-83

Region	Business		University		Non-Profit		Other Canadian		Total
	$M	%	$M	%	$M	%	$M	%	$M
Nfld	2.3	18.5	7.6	61.3	0.1	0.8	2.4	19.4	12.4
PEI	2.5	62.5	0.3	7.5	0.5	15.0	0.6	15.0	4.0
NS	9.4	32.8	16.2	56.4	0.4	1.4	2.7	9.4	28.7
NB	2.7	20.1	6.2	46.3	0.4	3.0	4.1	30.6	13.4
Que	105.1	48.2	104.8	48.1	2.9	1.3	5.2	2.4	218.0
Ont	112.7	38.3	162.2	55.2	3.3	1.1	15.9	5.4	294.1
Man	5.9	19.9	20.7	69.7	0.9	3.0	2.2	7.4	29.7
SASK	3.9	17.0	4.9	65.1	0.2	0.9	3.9	17.0	22.9
Alta	9.8	21.4	33.3	72.9	0.4	0.9	2.2	4.8	45.7
BC	35.2	31.4	68.5	61.2	1.1	1.0	7.2	6.4	112.0
NCR	60.1	67.5	19.5	21.9	6.8	7.6	2.7	3.0	89.1
TOTAL	385.7	42.0	.457.4	49.8	21.7	2.4	52.8	5.8	917.6

Notes: 1. Components do not add to total due to exclusion of unallocated funds and Yukon and due to rounding.

2. NCR refers to National Capital Region and includes Hull and Ottawa.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary, May 1985.

Table 22
Federal Extramural Payments to Performing Sectors for Scientific Activities
1983-84

Region	Business		University		Non-Profit		Other Canadian		Total
	$M	%	$M	%	$M	%	$M	%	$M
Nfld	4.2	24.1	8.9	51.1	0.4	2.1	4.0	22.7	17.5
PEI	1.9	56.1	0.4	10.8	0.4	12.1	0.7	21.0	3.3
NS	10.9	32.5	19.6	58.6	0.2	0.6	2.8	8.3	33.4
NB	6.8	34.5	7.7	38.7	0.4	2.0	4.9	24.8	10.8
Que	139.1	51.5	110.0	40.7	14.5	5.3	6.8	2.5	270.5
Ont	115.5	34.4	182.0	54.2	15.3	4.5	23.1	6.9	335.8
Man	10.4	28.5	21.2	58.3	1.1	3.2	3.7	10.0	36.4
SASK	4.2	14.6	17.7	61.7	0.4	1.4	6.4	22.3	28.7
Alta	15.3	26.9	38.6	67.8	0.4	0.7	2.6	4.6	56.9
BC	26.0	23.0	75.8	67.1	1.4	1.3	9.7	8.6	112.9
NCR	52.9	54.3	21.8	22.3	18.5	18.9	4.4	4.5	97.5
TOTAL	419.6	39.5	509.6	48.0	57.8	5.4	75.3	7.1	1062.3

Notes: 1. Components do not add to total due to exclusion of unallocated funds, NWT and Yukon and due to rounding.

2. NCR refers to National Capital Region and includes Hull and Ottawa.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary, May 1985.

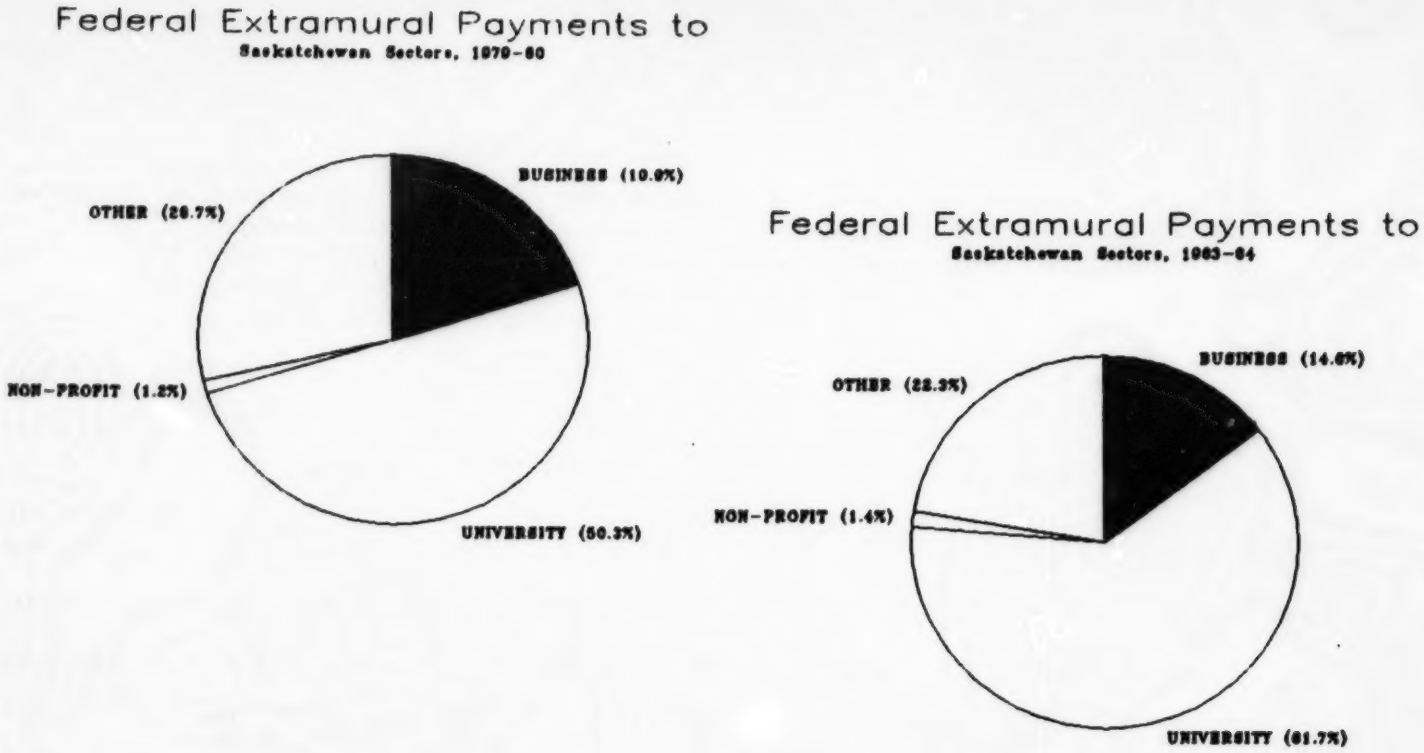
Table 23
Federal Extramural Payments to Saskatchewan
Sectors for Scientific Activity
1979-80 to 1983-84

Sector	1979-80		1980-81		1981-82		1982-83		1983-84	
	$M	%	$M	%	$M	%	$M	%	$M	%
Business	3.4	9.7	4.2	23.5	3.8	(9.5)	3.9	2.6	4.2	7.7
University	8.6	26.5	9.1	5.8	11.9	30.8	14.9	25.2	17.7	18.8
Non-Profit Institutions	0.3	200.0	-	-	-	-	0.2	-	0.4	100.0
Other Canadian	4.9	63.3	2.4	(51.0)	2.1	(12.5)	3.9	85.7	6.4	64.1
TOTAL	17.1	31.5	15.7	(8.2)	17.8	13.4	22.9	28.7	28.7	25.3

Notes:
1. Brackets indicate a decrease.
2. Components may not add to total due to rounding.
3. Other Canadian refers to provincial and municipal governments; provincial research councils and foundations; and categories not already mentioned.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985.

Figure 16


Federal Extramural Payments to
Saskatchewan Sectors, 1979-80
BUSINESS (10.9%)
OTHER (26.7%)
NON-PROFIT (1.2%)
UNIVERSITY (50.3%)
Federal Extramural Payments to
Saskatchewan Sectors, 1983-84
BUSINESS (14.6%)
OTHER (22.3%)
NON-PROFIT (1.4%)
UNIVERSITY (61.7%)

4.0 Federal Granting Council Expenditures

4.1 This section provides summary data on the federal granting councils, with emphasis on Saskatchewan's share of funding.

4.2 Granting council support of Canadian research increased by 114.4% from $219.1 million in 1979-80 to $469.7 million in 1983-84 (Table 24 and Figure 17). NSERC is the only granting council which provides funding to the business sector and funding of this type makes up typically less than 1.0% of its expenditures. It is important to note that Table 24 includes funding to all sectors: business, university, non-profit institutions, foreign and other Canadian.

4.3 Saskatchewan's support from the federal granting councils experienced a 138.7% increase from $6.6 million in 1979-80 to $15.7 million in 1983-84. Annual growth exceeded 21% for all years during this five year period.

4.4 Saskatchewan's proportionate share of total federal granting council support increased from 3.0% in 1979-80 to 3.3% in 1983-84 (Table 25). Saskatchewan improved its provincial rank to seventh from eighth for the previous four years. The Western provinces' share has declined slightly over the five years from 25.5% in 1979-80 to 24.4% in 1983-84 (Figure 18).

4.5 In 1983-84, Saskatchewan ranked: seventh in MRC funding (unchanged from 1979-80), receiving $3.7 million (2.7% of total MRC funding); sixth in NSERC funding (unchanged from 1979-80 but an improvement from eighth position in 1980-81 and 1981-82), receiving $11.5 million (4.2% of total NSERC funding); and tenth in SSHRC funding (unchanged from 1979-80 but a decline from 1982-83), receiving $0.8 million (0.8% of total SSHRC funding) (Tables 26 to 31 and Figure 19).

4.6 In Saskatchewan, NSERC provided 73.4% of granting council funding in 1983-84 (an increase from 68.0% in 1979-80). SSHRC decreased from 3.3% to 2.7% in 1983-84. MRC support declined from 28.7% to 23.8% in 1983-84 (Figure 20). This allocation of support among the three granting councils differs markedly from the Canadian average in terms of overall percentages.

4.7 Saskatchewan's shortfall in granting council support increased from $1.7 million and $1.8 million in 1979-80 to $2.0 and $2.3 million respectively based on population and gross domestic product proportions (Table 32 and Figure 21).

4.8 With respect to NSERC funding, Saskatchewan's experienced a significant improvement in 1983-84 enjoying a surplus position based both on population and GDP (Table 34).

4.9 In terms of population and GDP expenditure ratios for total federal granting councils receipts, Saskatchewan's share is low along with Alberta, British Columbia, New Brunswick and PEI. SSHRC support to Saskatchewan is significantly low, with MRC support running slightly over two-thirds of anticipated receipts, and NSERC support improving into 1983-84 to a very satisfactory level.

Figure 17

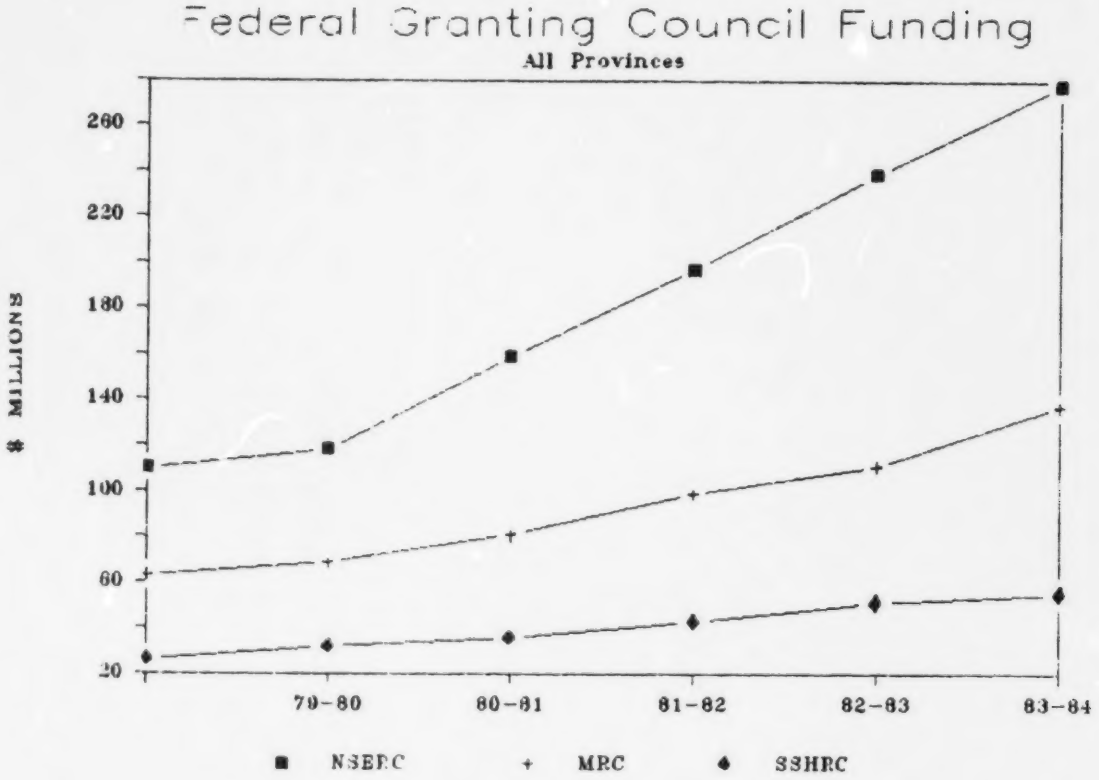

Federal Granting Council Funding
All Provinces
$ MILLIONS
260
220
180
140
100
60
20
79-80
80-81
81-82
82-83
83-84
NSERC
MRC
SSHRC

Table 24
Receipts from the Federal Granting Councils
1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	$000	%	$000	%	$000	%	$000	%	$000	%
Nfld	4,032	22.8	4,466	10.8	5,686	27.3	6,248	9.9	7,391	18.3
PEI	119	40.0	202	69.7	219	8.4	330	50.7	316	(4.2)
NS	7,609	19.7	9,480	24.6	12,021	26.8	13,667	13.7	15,621	14.3
NB	2,695	8.5	3,569	32.4	4,838	35.6	5,411	11.8	6,101	12.8
Que	49,745	5.3	61,521	23.7	79,343	29.0	93,650	18.0	108,178	15.5
Ont	79,462	15.9	97,587	22.8	125,885	29.0	145,889	15.9	172,424	18.2
Man	9,203	5.6	11,708	27.2	14,174	21.1	16,850	18.9	17,238	2.3
SASK	6,590	31.5	8,001	21.4	9,704	21.3	12,906	33.0	15,732	21.9
Alta	17,161	4.5	21,592	25.8	27,710	28.3	31,205	12.6	34,695	11.2
BC	22,281	9.1	27,055	21.4	33,486	23.8	41,487	23.9	46,803	12.8
NCR	9,684	8.3	12,814	32.3	15,064	17.6	18,855	25.2	20,094	6.6
TOTAL	219,068	9.9	275,548	25.8	337,784	22.6	400,937	18.7	469,676	17.1

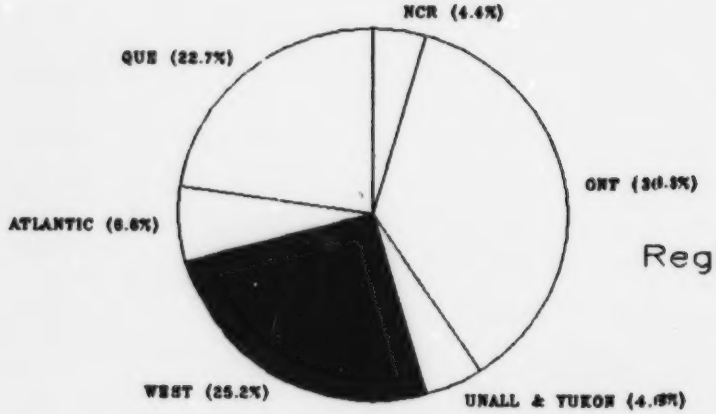
Notes: 1. Total includes payments to all sectors: Business; University; Non-profit Institutions; Foreign; and Other Canadian.
2. Components do not add to total due to exclusion of unallocated funds and Yukon.
3. NCR refers to National Capital Region and includes Ottawa and Hull.

Source: Statistics Canada. Science, Technology and Capital Stock Division; Region Data Summary, May 1985.

Figure 18

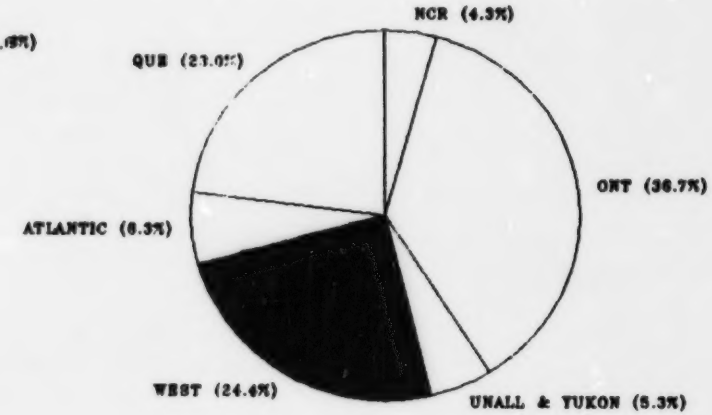
Regional Allocation of Federal Granting

Council Sponsored Research, 1979-80



Regional Allocation of Federal Granting

Council Sponsored Research, 1983-84



Note: UNALL means unallocated; NCR refers to National Capital Region.

Table 25
Receipts from the Federal Granting Councils Regional Allocation and Ranking
1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Nfld	1.8	9	1.6	9	1.7	9	1.6	9	1.6	9
PEI	0.1	11	0.1	11	0.1	11	0.1	11	0.1	11
NS	3.5	7	3.4	7	3.6	7	3.4	7	3.3	7
NB	1.2	10	1.3	10	1.4	10	1.3	10	1.3	10
Que	22.7	2	22.3	2	23.5	2	23.4	2	23.0	2
Ont	36.3	1	35.4	1	37.3	1	36.4	1	36.7	1
Man	4.2	6	4.2	6	4.2	6	4.2	6	3.7	6
SASK	3.0	8	2.9	8	2.9	8	3.2	8	3.3	7
Alta	7.8	4	7.8	4	8.2	4	7.8	4	7.4	4
BC	10.2	3	9.8	3	9.9	3	10.3	3	10.0	3
NCR	4.4	5	4.7	5	4.5	5	4.7	5	4.3	5
TOTAL	100.0		100.0		100.0		100.0		100.0	

Notes:
1. Total includes payments to all sectors: Business; University; Non-Profit Institutions; Foreign; and Other Canadian.
2. Components do not add to total due to exclusion of unallocated funds and Yukon.
3. NCR refers to National Capital Region and includes Ottawa and Hull.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985.

Figure 19

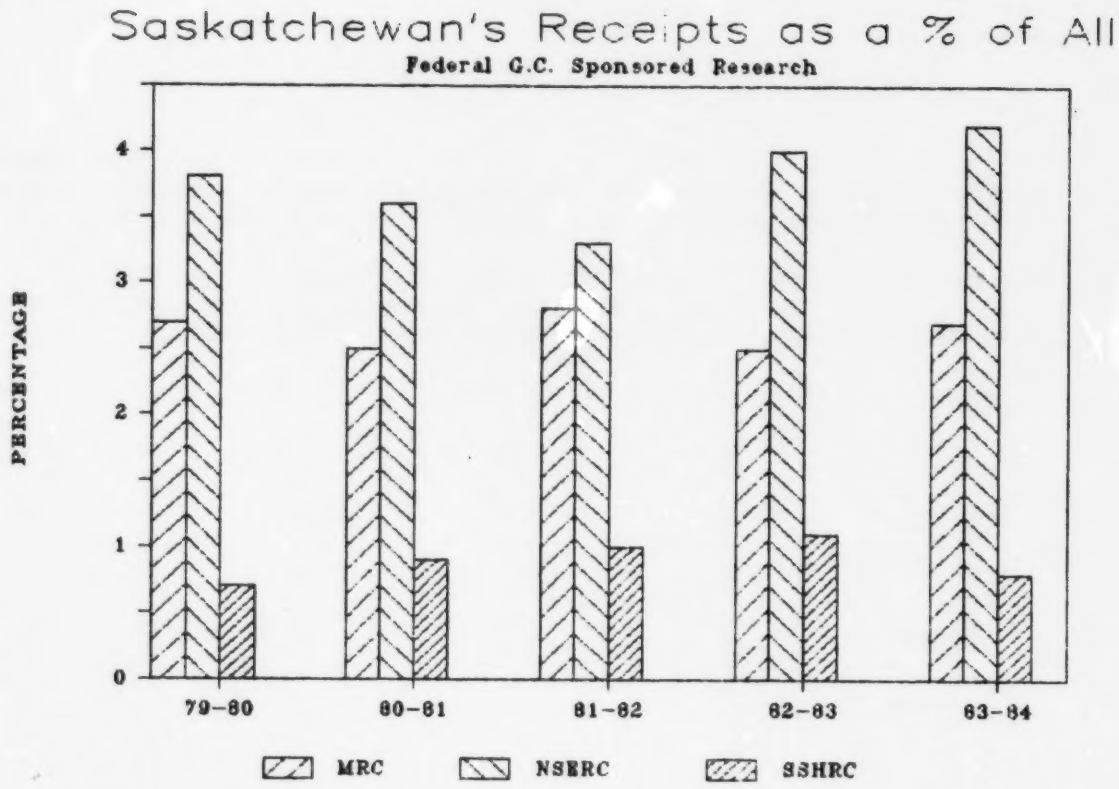

Saskatchewan's Receipts as a % of All
Federal G.C. Sponsored Research
PERCENTAGE
0
1
2
3
4
79-80
80-81
81-82
82-83
83-84
MRC
NSERC
SSHRC

Figure 20

% Distribution of Federal G.C.

Sponsored Research in Can. & Sask.

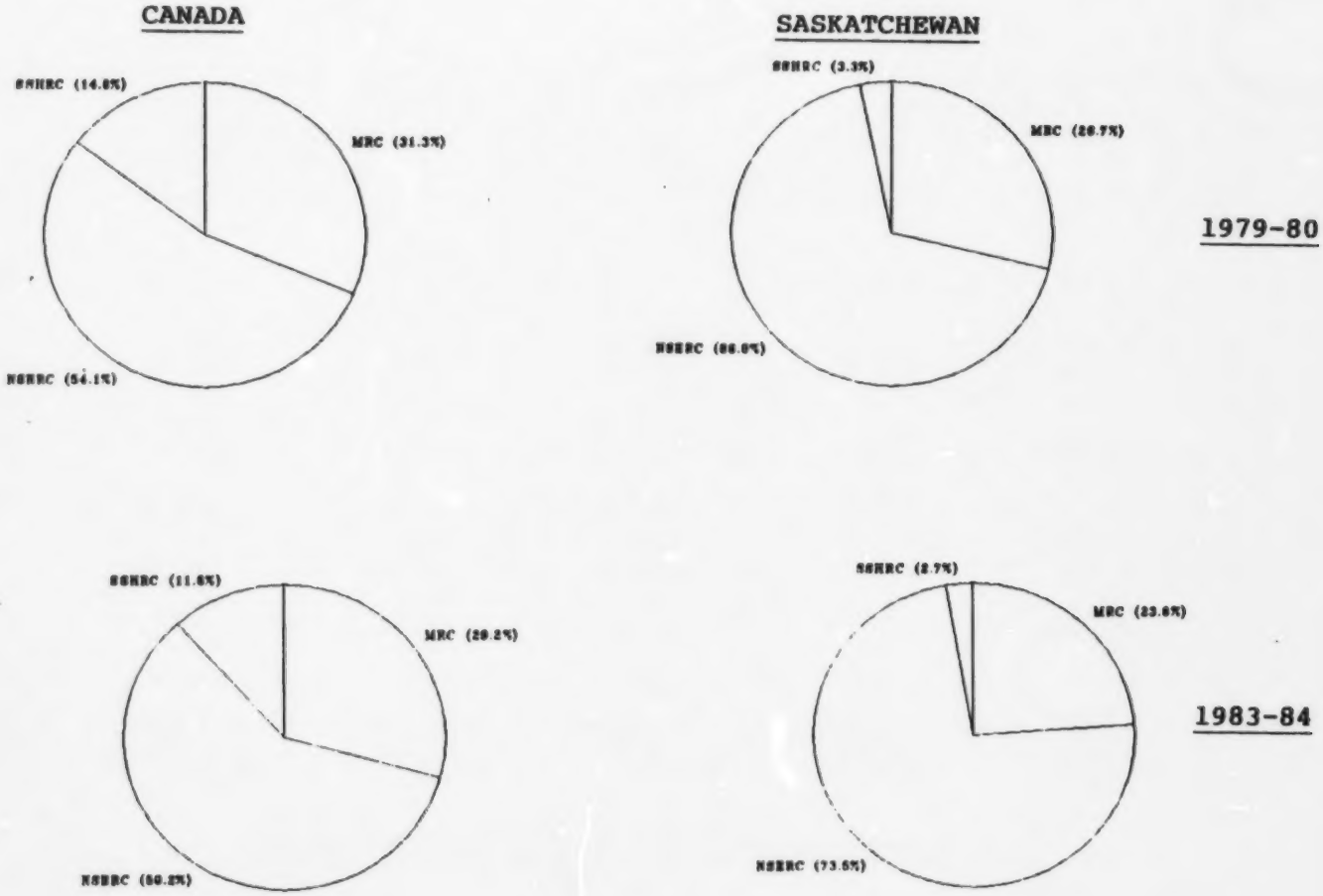


Table 26
Receipts from the Federal Granting Councils - MRC
1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	$000	%	$000	%	$000	%	$000	%	$000	%
Nfld	1,059	28.5	1,323	24.9	1,507	13.9	1,813	20.3	1,876	3.5
PEI	-		-	-	-	-	-	-	-	-
NS	2,508	6.2	2,705	7.9	3,337	23.4	4,103	23.0	4,792	16.8
NB	28	-	29	3.6	18	(37.9)	-	-	-	-
Que	20,612	1.3	25,174	22.1	31,077	23.4	35,128	13.0	43,298	23.3
Ont	23,642	18.3	27,430	16.0	33,877	23.5	37,478	10.6	47,225	25.1
Man	4,246	(8.1)	5,100	20.1	5,688	11.5	5,891	3.6	7,047	19.6
SASK	1,888	39.0	1,983	5.0	2,790	40.7	2,817	1.0	3,751	33.2
Alta	5,701	13.7	6,543	14.8	7,443	13.8	8,510	14.3	10,014	17.7
BC	4,346	(1.9)	5,080	16.9	6,877	35.4	8,443	22.8	11,230	33.0
NCR	1,785	(1.5)	2,038	14.2	2,378	16.7	2,904	22.1	3,370	16.0
TOTAL	68,676	9.0	80,475	17.2	98,410	22.3	110,908	12.7	137,313	23.8

Notes: 1. Total includes payments to all sectors: Business; University; Non-profit Institutions; Foreign; and Other Canadian.
2. Components do not add to total due to exclusion of unallocated funds and Yukon.
3. NCR refers to National Capital Region and includes Ottawa and Hull.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary, May 1985.

Table 27

Receipts from the Federal Granting Councils Regional Allocation and Ranking - MRC
1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Nfld	1.5	9	1.6	9	1.5	9	1.6	9	1.4	9
PEI	-	11	-	11	-	11	-	10	-	10
NS	3.7	6	3.4	6	3.4	6	3.7	6	3.5	6
NB	-	10	-	10	-	10	-	10	-	10
Que	30.0	2	31.3	2	31.6	2	31.7	2	31.5	2
Ont	34.4	1	34.1	1	34.4	1	33.8	1	34.4	1
Man	6.2	5	6.3	4	5.8	5	5.3	5	5.1	5
SASK	2.7	7	2.5	7	2.8	7	2.5	8	2.7	7
Alta	8.3	3	8.1	3	7.6	3	7.7	3	7.3	4
BC	6.3	4	6.3	4	7.0	4	7.6	4	8.2	3
NCR	2.6	8	2.5	7	2.4	8	2.6	7	2.5	8
TOTAL	100.0		100.0		100.0		100.0		100.0	

Notes:
1. Total includes payments to all sectors: Business; University; Non-Profit Institutions; Foreign; and Other Canadian.
2. Components do not add to total due to exclusion of unallocated funds and Yukon.
3. NCR refers to National Capital Region and includes Ottawa and Hull.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985.

Table 28
Receipts from the Federal Granting Councils - NSERC
1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	$000	%	$000	%	$000	%	$000	%	$000	%
Nfld	2,519	23.7	2,754	9.3	3,566	29.5	3,953	10.9	4,893	23.8
PEI	83	25.8	119	43.4	133	11.8	232	74.4	150	(35.3)
NS	4,095	18.9	5,882	43.6	7,301	24.1	8,360	14.5	9,655	15.5
NB	2,290	3.2	3,312	44.6	4,250	28.3	4,772	12.3	5,620	17.8
Que	23,004	3.3	30,746	33.7	39,346	28.0	46,800	18.9	53,178	13.6
Ont	44,666	9.6	59,848	34.0	75,548	26.2	89,418	18.4	108,046	20.8
Man	4,281	15.4	6,204	44.9	7,210	16.2	9,576	32.8	9,023	(5.8)
SASK	4,483	29.9	5,703	27.2	6,470	13.4	9,523	47.2	11,553	21.3
Alta	10,122	(3.1)	14,101	39.3	17,795	26.2	20,551	15.5	22,854	11.2
BC	14,952	6.8	19,683	31.6	22,929	16.5	28,513	24.4	31,490	10.4
NCR	4,919	5.2	6,959	41.5	8,454	21.5	11,178	32.2	12,138	8.6
TOTAL	118,414	7.5	158,950	34.2	196,944	23.9	238,703	21.2	277,916	16.4

Notes: 1. Total includes payments to all sectors: Business; University; Non-profit Institutions; Foreign; and Other Canadian.
2. Components do not add to total due to exclusion of unallocated funds and Yukon.
3. NCR refers to National Capital Region and includes Ottawa and Hull.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary, May 1985.

Table 29

Receipts from the Federal Granting Councils Regional Allocation and Ranking - NSERC

1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Nfld	2.1	9	1.7	10	1.8	10	1.7	10	1.8	10
PEI	0.1	11	0.1	11	0.1	11	0.1	11	0.1	11
NS	3.5	8	3.7	7	3.7	6	3.5	8	3.5	7
NB	1.9	10	2.1	9	2.2	9	2.0	9	2.0	9
Que	19.4	2	19.3	2	20.0	2	19.6	2	19.1	2
Ont	37.7	1	37.7	1	38.4	1	37.5	1	38.9	1
Man	3.6	7	3.9	6	3.7	6	4.0	6	3.2	8
SASK	3.8	6	3.6	8	3.3	8	4.0	6	4.2	6
Alta	8.5	4	8.9	4	9.0	4	8.6	4	8.2	4
BC	12.6	3	12.4	3	11.6	3	11.9	3	11.3	3
NCR	4.2	5	4.3	5	4.3	5	4.6	5	4.4	5
TOTAL	100.0		100.0		100.0		100.0		100.0	

Notes:
1. Total includes payments to all sectors: Business; University; Non-Profit Institutions; Foreign; and Other Canadian.
2. Components do not add to total due to exclusion of unallocated funds and Yukon.
3. NCR refers to National Capital Region and includes Ottawa and Hull.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985.

Table 30
Receipts from the Federal Granting Councils - SSHRC
1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	$000	%	$000	%	$000	%	$000	%	$000	%
Nfld	454	7.3	389	(14.3)	613	57.6	482	(21.4)	622	29.0
PEI	36	89.5	83	130.6	86	3.6	98	14.0	166	69.4
NS	1,006	82.2	893	(11.2)	1,383	54.9	1,204	(12.9)	1,174	(2.5)
NB	377	42.3	228	(39.5)	570	150.0	639	12.1	481	(24.7)
Que	6,129	32.1	5,601	(8.6)	8,920	59.3	11,722	31.4	11,702	(0.2)
Ont	11,154	42.4	10,309	(7.6)	16,460	59.7	18,993	15.4	17,123	(9.8)
Man	676	78.3	404	(40.2)	1,276	215.8	1,383	8.4	1,168	(15.5)
SASK	219	9.0	315	43.8	444	41.0	566	27.5	428	(24.4)
Alta	1,338	37.9	948	(29.1)	2,472	160.8	2,144	(13.3)	1,827	(14.8)
BC	2,983	49.2	2,292	(23.2)	3,680	60.6	4,531	23.1	4,083	(9.9)
NCR	2,980	21.2	3,817	28.1	4,232	10.9	4,773	12.8	4,586	(3.9)
TOTAL	31,978	21.7	36,123	13.0	42,430	17.5	51,326	20.8	54,447	6.3

Notes: 1. Total includes payments to all sectors: Business; University; Non-profit Institutions; Foreign; and Other Canadian.
2. Components do not add to total due to exclusion of unallocated funds and Yukon.
3. NCR refers to National Capital Region and includes Ottawa and Hull.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary, May 1985.

Table 31

Receipts from the Federal Granting Councils Regional Allocation and Ranking - SSHRC

1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Nfld	1.4	8	1.1	7	1.4	8	0.9	10	1.1	8
PEI	0.1	11	0.2	11	0.2	11	0.2	11	0.3	11
NS	3.1	6	2.5	6	3.3	6	2.3	7	2.2	6
NB	1.2	9	0.6	10	1.3	9	1.2	8	0.9	9
Que	19.2	2	15.5	2	21.0	2	22.9	2	21.5	2
Ont	34.9	1	28.5	1	38.8	1	37.0	1	31.4	1
Man	2.1	7	1.1	7	3.0	7	2.7	6	2.1	7
SASK	0.7	10	0.9	9	1.0	10	1.1	9	0.8	10
Alta	4.2	5	2.6	5	5.8	5	4.2	5	3.4	5
BC	9.3	3	6.3	4	8.7	4	8.8	4	7.5	4
NCR	9.3	3	10.6	3	9.9	3	9.3	3	8.4	3
TOTAL	100.0		100.0		100.0		100.0		100.0	

Notes:
1. Total includes payments to all sectors: Business; University; Non-Profit Institutions; Foreign; and Other Canadian.
2. Components do not add to total due to exclusion of unallocated funds and Yukon.
3. NCR refers to National Capital Region and includes Ottawa and Hull.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985.

Figure 21

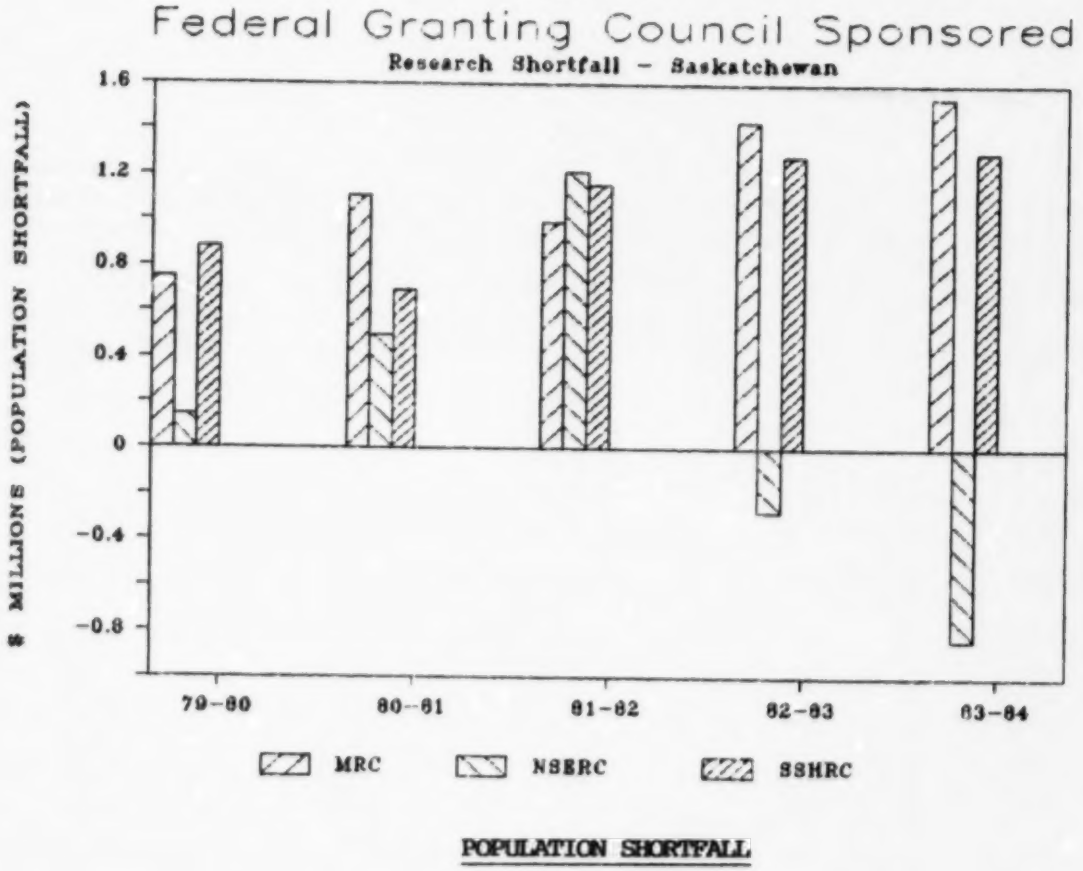
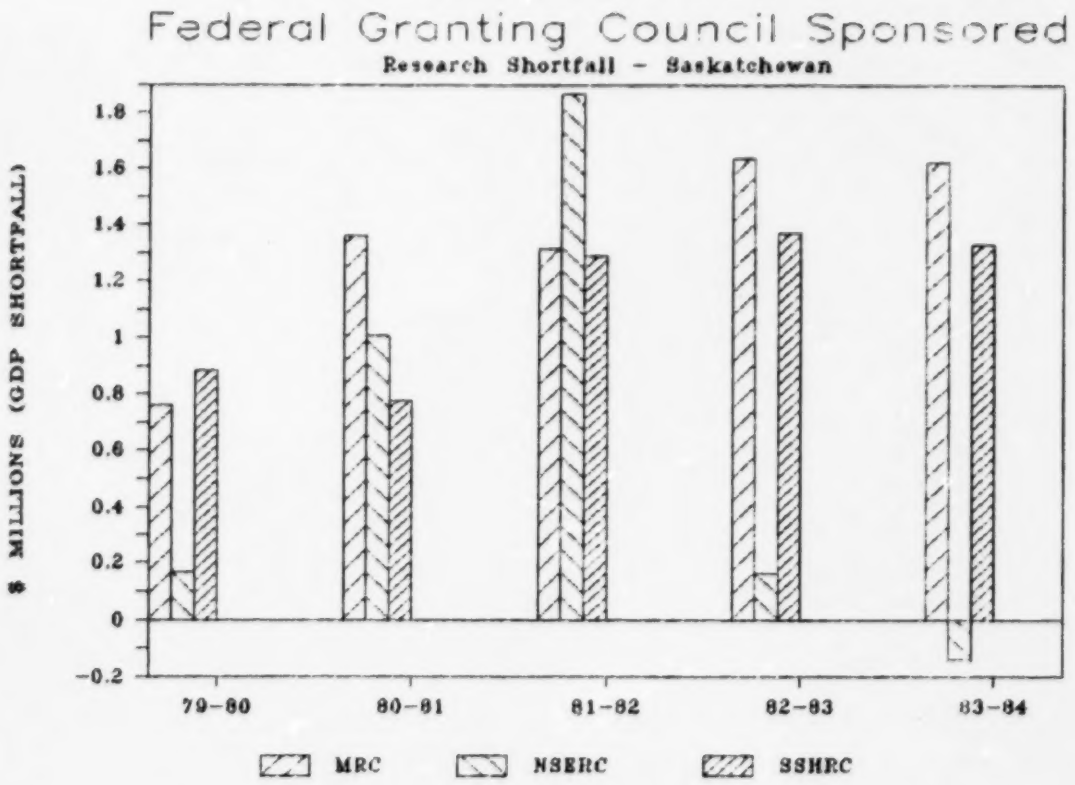

Federal Granting Council Sponsored
Research Shortfall - Saskatchewan
$ MILLIONS (POPULATION SHORTFALL)
1.6
1.2
0.8
0.4
0
-0.4
-0.8
79-80
80-81
81-82
82-83
83-84
MRC
NSERC
SSHRC
POPULATION SHORTFALL

Figure 21 concluded



METRIC

Figure 22

Population and GDP Federal Granting Councils' Sponsored Research Allocation

1983-84

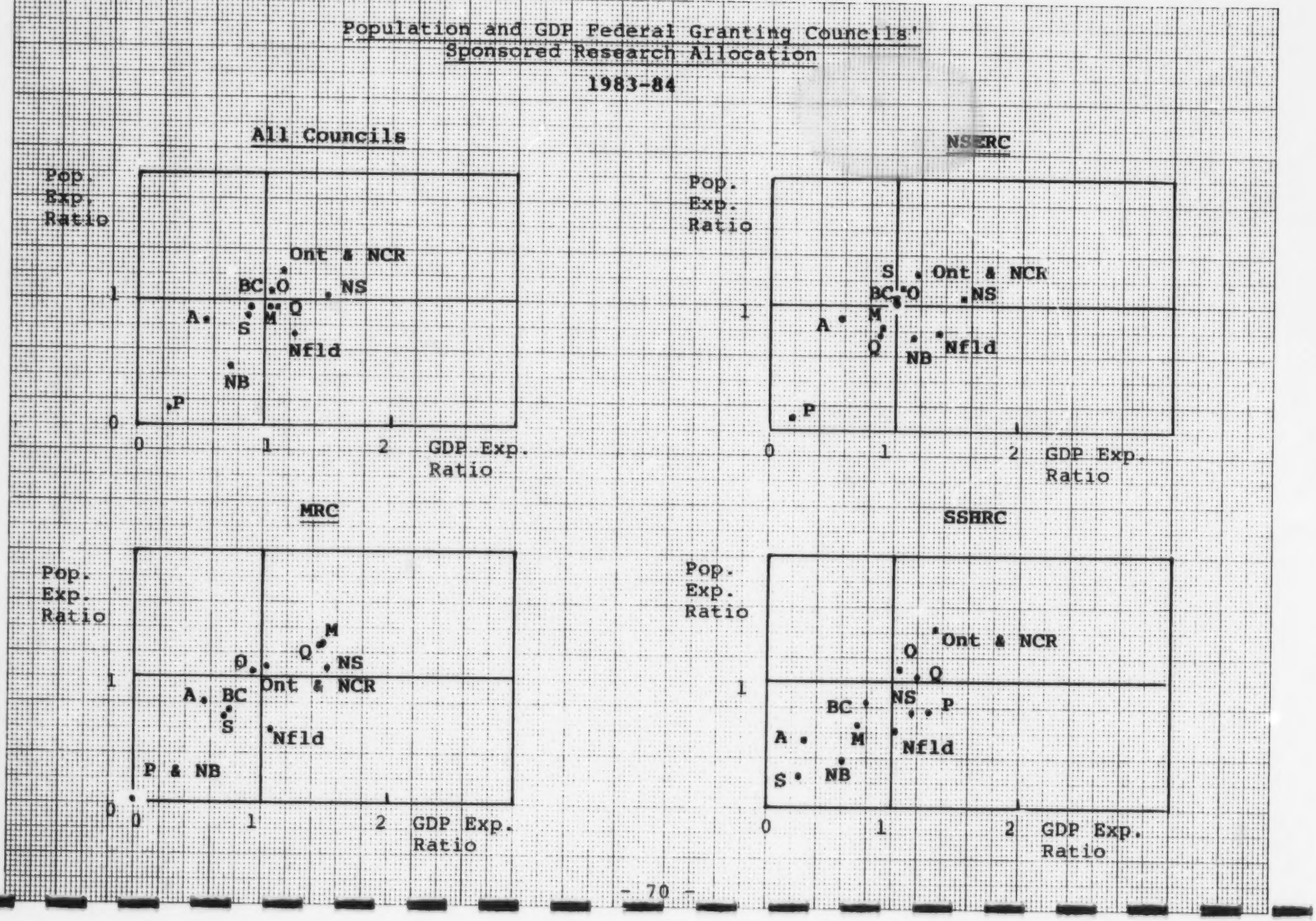


Table 32
Receipts from the Federal Granting Councils - Population and GDP Expenditure Ratios
1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	Pop.	GDP	Pop.	GDP	Pop.	GDP	Pop.	GDP	Pop.	GDP
Nfld	0.82	1.39	0.74	1.34	0.74	1.33	0.70	1.21	0.72	1.23
PEI	0.11	0.20	0.15	0.28	0.13	0.25	0.17	0.31	0.14	0.24
NS	1.03	1.62	1.04	1.78	1.05	1.75	1.02	1.56	1.02	1.50
NB	0.44	0.64	0.48	0.84	0.52	0.89	0.49	0.81	0.48	0.75
Que	0.89	1.03	0.90	1.04	0.91	1.06	0.92	1.07	0.93	1.08
Ont	1.06	1.01	1.06	1.01	1.08	1.03	1.07	1.02	1.09	1.03
Man	1.02	1.16	1.07	1.23	1.02	1.16	1.04	1.15	0.92	1.04
SASK	**0.79**	**0.78**	**0.78**	**0.72**	**0.74**	**0.68**	**0.84**	**0.80**	**0.89**	**0.87**
Alta	0.95	0.64	0.94	0.61	0.92	0.61	0.86	0.57	0.83	0.56
BC	0.98	0.88	0.95	0.86	0.91	0.83	0.95	0.89	0.93	0.90
Ont & NCR	1.19	1.13	1.20	1.14	1.21	1.15	1.20	1.15	1.22	1.15
SASK SHORTFALL ($M)	**1,774**	**1,816**	**2,293**	**3,144**	**3,356**	**4,471**	**2,438**	**3,172**	**2,006**	**2,273**
% CHANGE	**(29.4)**	**(27.1)**	**29.3**	**73.1**	**46.4**	**42.2**	**(27.4)**	**(29.1)**	**(17.7)**	**(28.3)**

Note: Population and GDP expenditure ratios represent relationship between actual receipts from the federal granting councils and receipts if based on population and gross domestic product proportions.

Table 33

Receipts from the Federal Granting Councils - MRC - Population and GDP Expenditure Ratios

1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	Pop.	GDP	Pop.	GDP	Pop.	GDP	Pop.	GDP	Pop.	GDP
Nfld	0.68	1.16	0.73	1.32	0.68	1.22	0.73	1.26	0.61	1.05
PEI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NS	1.08	1.69	0.99	1.69	1.01	1.68	1.11	1.69	1.05	1.54
NB	0.01	0.02	0.01	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Que	1.17	1.35	1.22	1.45	1.24	1.44	1.25	1.45	1.25	1.45
Ont	1.00	0.95	0.99	0.95	1.01	0.95	0.99	0.94	1.01	0.94
Man	1.49	1.69	1.55	1.79	1.42	1.60	1.31	1.46	1.27	1.42
SASK	**0.72**	**0.71**	**0.64**	**0.59**	**0.74**	**0.68**	**0.66**	**0.63**	**0.71**	**0.70**
Alta	1.00	0.68	0.95	0.61	0.85	0.56	0.84	0.56	0.80	0.54
BC	0.61	0.55	0.59	0.54	0.64	0.59	0.70	0.66	0.75	0.72
Ont. & NCR	1.08	1.02	1.07	1.02	1.08	1.02	1.07	1.02	1.08	1.01
SASK SHORTFALL ($M)	**751**	**764**	**1,105**	**1,361**	**991**	**1,314**	**1,434**	**1,638**	**1,540**	**1,619**
% CHANGE	**(30.3)**	**(28.7)**	**47.1**	**78.1**	**(10.3)**	**(3.5)**	**44.7**	**24.7**	**7.4**	**(1.2)**

Note: Population and GDP expenditure ratios represent relationship between actual receipts from the MRC and receipts if based on population and gross domestic product proportions.

Table 34

Receipts from the Federal Granting Councils - NSERC - Population and GDP Expenditure Ratios 1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	Pop.	GDP	Pop.	GDP	Pop.	GDP	Pop.	GDP	Pop.	GDP
Nfld	0.92	1.57	0.75	1.37	0.79	1.42	0.73	1.27	0.79	1.35
PEI	0.14	0.26	0.15	0.27	0.14	0.26	0.20	0.36	0.11	0.19
NS	1.00	1.58	1.04	1.83	1.09	1.81	1.04	1.58	1.04	1.54
NB	0.68	0.98	0.74	1.30	0.77	1.33	0.72	1.19	0.74	1.14
Que	0.75	0.86	0.75	0.86	0.77	0.90	0.76	0.89	0.76	0.88
Ont	1.08	1.02	1.08	1.03	1.10	1.05	1.09	1.04	1.14	1.07
Man	0.86	0.97	0.94	1.08	0.89	1.00	0.98	1.09	0.80	0.90
SASK	**0.97**	**0.96**	**0.92**	**0.85**	**0.84**	**0.78**	**1.03**	**0.98**	**1.08**	**1.01**
Alta	1.02	0.69	1.02	0.66	1.00	0.66	0.94	0.62	0.90	0.61
BC	1.19	1.07	1.14	1.04	1.05	0.97	1.08	1.02	1.03	1.00
Ont. & NCR	1.20	1.13	1.21	1.15	1.23	1.16	1.22	1.17	1.26	1.19
SASK SHORTFALL ($M)	**145**	**168**	**494**	**1,006**	**1,212**	**1,868**	**(278)**	**165**	**(836)**	**(137)**
% CHANGE	**(82.8)**	**(79.8)**	**240.7**	**498.8**	**145.3**	**85.7**	**(122.9)**	**(91.2)**	**(200.7)**	**(183.0)**

Note: Population and GDP expenditure ratios represent relationship between actual receipts from the NSERC and receipts if based on population and gross domestic product proportions.

Table 35
Receipts from the Federal Granting Councils - SSHRC - Population and GDP Expenditure Ratios
1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	Pop.	GDP	Pop.	GDP	Pop.	GDP	Pop.	GDP	Pop.	GDP
Nfld	0.70	1.19	0.65	1.19	0.66	1.17	0.45	0.77	0.62	1.06
PEI	0.26	0.47	0.64	1.17	0.43	0.80	0.42	0.75	0.77	1.28
NS	1.04	1.64	1.00	1.71	0.99	1.65	0.75	1.14	0.78	1.16
NB	0.47	0.68	0.31	0.55	0.50	0.86	0.48	0.80	0.39	0.61
Que	0.84	0.97	0.83	0.97	0.84	0.98	0.96	1.11	1.03	1.20
Ont	1.15	1.08	1.14	1.09	1.16	1.10	1.15	1.10	1.11	1.05
Man	0.57	0.65	0.38	0.43	0.75	0.85	0.71	0.79	0.64	0.72
SASK	0.20	0.20	0.31	0.29	0.28	0.26	0.31	0.29	0.25	0.24
Alta	0.57	0.38	0.42	0.27	0.67	0.44	0.49	0.32	0.45	0.30
BC	1.00	0.90	0.82	0.74	0.81	0.75	0.86	0.81	0.83	0.80
Ont. & NCR	1.44	1.36	1.57	1.49	1.46	1.38	1.44	1.38	1.41	1.33
SASK SHORTFALL ($M)	878	883	694	777	1,153	1,290	1,281	1,370	1,302	1,328
% CHANGE	48.6	49.9	(21.0)	(12.0)	66.1	66.0	11.1	6.2	1.6	(3.1)

Note: Population and GDP expenditure ratios represent relationship between actual receipts from the SSHRC and receipts if based on population and gross domestic product proportions.

5.0 Funding of Scientific Activity in the University Sector

5.1 This section provides summary data on the federal support received by Saskatchewan's two universities (the University of Saskatchewan and the University of Regina).

5.2 The Federal Government funds university research primarily through its three granting councils: the Medical Research Council of Canada (MRC); the Natural Sciences and Engineering Council of Canada (NSERC); and the Social Sciences and Humanities Research Council of Canada (SSHRC). It should be noted that technically the federal government supports both research and experimental development and related scientific activity in the university sector; however, since typically, less than 10 percent is directed towards related scientific activity, the term "research" is often used collectively in reference to university scientific activity.

Funding from the three granting councils increased from 76.5% of total federally sponsored university research in Saskatchewan in 1979-80 to 88.9% in 1983-84 (Tables 36 to 40). This increase resulted in Saskatchewan going from the ninth highest regional percentage in 1979-80 to the second highest in 1983-84.

5.3 Federally sponsored university research in Saskatchewan increased by 105.9% from $8.6 million in 1979-80 to $17.6 million in 1983-84. This growth exceeds the 96.7% increase in total Canadian federally sponsored university research for the same five year period.

5.4 In terms of federally sponsored university research, Saskatchewan's rank of eighth remained unchanged since 1979-80.

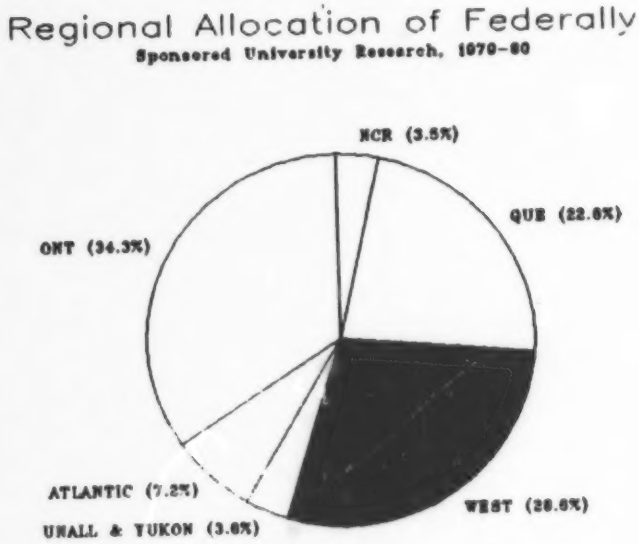
5.5 Saskatchewan's proportionate share of university funding increased from 3.3% in 1979-80 to 3.5% in 1983-84. The Western provinces' share increased from 28.6% to 30.2% over the five year period (Figure 23).

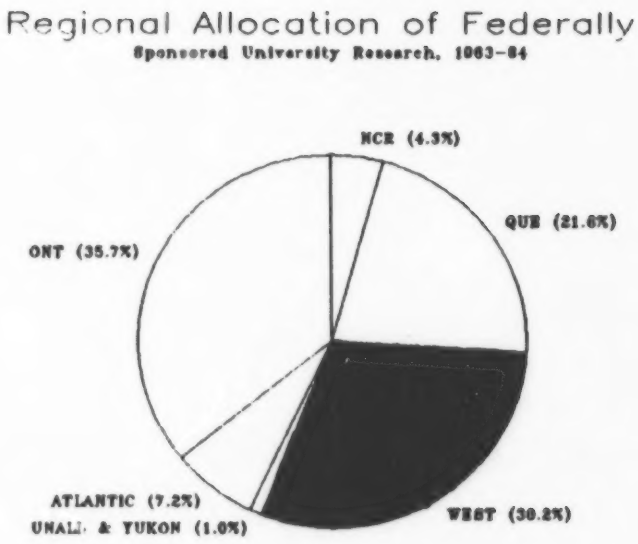
5.6 In terms of percentage distribution of federally sponsored university research in both Canada and Saskatchewan, NSERC has increased its share (Figure 24). In Saskatchewan, there has been a significant decrease since 1979-80 (23.5% to 11.1%) in the amount of sponsored research provided by agencies other than the federal granting councils. This trend is also evident in total Canadian figures but is not as dramatic.

In Saskatchewan, MRC and SSHRC support are both well below the Canadian average distribution, although MRC allocations are becoming more similar.

5.7 In addition to support from granting councils, Saskatchewan universities receive federal funds from a number of other federal government departments and agencies. In 1983-84, most of the funds received from federal departments were in the form of contracts ($1.2 million) as compared to grant payments ($0.8 million). In 1983-84, 30.6% of the funding was provided by the Department of Agriculture (AGR), 21.8% by National Health and Welfare (NHW), and 5.7% by the NRC (Table 41 and Figure 25). These percentages were a decline from previous years as other departments increased their expenditures (15.9% in 1983-84, 8.3% in 1982-83 and 3.4% in 1981-82).

Figure 23





Note: UNALL means unallocated; NCR refers to National Capital Region.

Table 36
Federally Sponsored University Research by Agency
1979-80

Region	MRC		NSERC		SSHRC		Other		Total		
	$000	%	$000	%	$000	%	$000	%	$000	%	% G.C.
Nfld	1,059	1.6	2,519	2.2	454	1.5	1,360	2.7	5,392	2.1	74.8
PEI	-	-	72	0.1	36	0.1	20	-	128	0.1	84.3
NS	2,508	3.8	4,064	3.6	1,006	3.4	1,884	3.8	9,462	3.7	80.1
NB	28	-	2,210	2.0	377	1.3	772	1.5	3,386	1.3	77.2
Que	20,459	31.1	22,685	20.0	6,112	20.4	9,841	19.7	59,098	22.8	83.3
Ont	23,642	35.9	43,545	38.4	11,031	36.9	10,750	21.5	88,968	34.3	87.9
Man	4,246	6.5	4,277	3.8	676	2.3	2,538	5.1	11,737	4.5	78.4
SASK	1,888	2.9	4,453	3.9	219	0.7	2,016	4.0	8,576	3.3	76.5
Alta	5,701	8.7	10,039	8.9	1,338	4.5	1,514	3.0	18,592	7.2	91.9
BC	4,346	6.6	14,789	13.1	2,983	10.0	13,223	26.4	35,342	13.6	62.6
NCR	1,664	2.5	4,632	4.1	1,349	4.5	1,484	3.0	9,129	3.5	83.7
CANADA	65,796	100.0	113,287	100.0	29,929	100.0	50,030	100.0	259,042	100.0	80.7

Notes:
1. Components do not add to Canada total due to exclusion of unallocated funds and Yukon.
2. Components may not add due to rounding.
3. NCR refers to National Capital Region and includes Ottawa and Hull.
4. Other refers to federal departments and agencies.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985

Table 37
Federally Sponsored University Research by Agency
1980-81

Region	MRC		NSERC		SSHRC		Other		Total		
	$000	%	$000	%	$000	%	$000	%	$000	%	% G.C.
Nfld	1,323	1.7	2,754	1.8	389	1.2	786	1.5	5,251	1.7	85.0
PEI	-	-	107	0.1	83	0.3	-	-	190	0.1	100.0
NS	2,705	3.5	5,869	3.9	593	1.9	2,082	4.0	11,549	3.7	82.0
NB	29	-	3,169	2.1	228	0.7	770	1.5	4,195	1.3	81.7
Que	24,959	32.3	30,254	19.7	5,583	17.5	9,319	17.9	70,115	22.4	86.7
Ont	27,430	35.5	58,241	38.2	10,099	31.6	11,939	22.9	107,709	34.3	88.9
Man	5,100	6.6	6,204	4.1	404	1.3	2,640	5.1	14,348	4.6	81.6
SASK	1,983	2.6	5,669	3.7	315	1.0	1,182	2.3	9,149	2.9	87.1
Alta	6,543	8.5	13,962	9.2	948	3.0	1,851	3.6	23,304	7.4	92.1
BC	5,080	6.6	19,426	12.8	2,292	7.2	17,219	33.0	44,016	14.0	60.9
NCR	1,903	2.5	6,532	4.3	1,371	4.3	2,375	4.6	12,181	3.9	80.5
CANADA	77,328	100.0	152,266	100.0	31,919	100.0	52,100	100.0	313,614	100.0	83.4

Notes:
1. Components do not add to Canada total due to exclusion of unallocated funds and Yukon.
2. Components may not add due to rounding.
3. NCR refers to National Capital Region and includes Ottawa and Hull.
4. Other refers to federal departments and agencies.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985

Table 38
Federally Sponsored University Research by Agency
1981-82

Region	MRC		NSERC		SSHRC		Other		Total		
	$000	%	$000	%	$000	%	$000	%	$000	%	% G.C.
Nfld	1,507	1.6	3,555	1.9	613	1.6	891	1.4	6,567	1.7	86.4
PEI	-	-	110	0.1	86	0.2	1	-	197	0.1	99.5
NS	3,337	3.5	7,250	3.8	1,383	3.6	2,262	3.6	14,232	3.7	84.1
NB	18	-	4,069	2.2	570	1.5	812	1.3	5,468	1.4	85.1
Que	30,853	32.5	38,772	20.5	8,901	23.3	12,593	19.9	91,119	23.6	86.2
Ont	33,877	35.7	73,359	38.8	16,272	42.5	14,574	23.1	138,082	35.8	89.4
Man	5,688	6.0	7,210	3.8	1,276	3.3	2,811	4.5	16,985	4.4	83.4
SASK	2,790	2.9	6,460	3.4	444	1.2	2,161	3.4	11,854	3.1	81.8
Alta	7,443	7.8	17,683	9.4	2,472	6.5	2,354	3.7	29,952	7.8	92.1
BC	6,877	7.2	22,588	11.9	3,630	9.5	20,647	32.7	53,741	13.9	61.6
NCR	2,206	2.3	8,013	4.2	1,879	4.9	3,312	5.2	15,410	4.0	78.5
CANADA	94,954	100.0	189,098	100.0	38,258	100.0	63,150	100.0	385,460	100.0	83.6

Notes:
1. Components do not add to Canada total due to exclusion of unallocated funds and Yukon.
2. Components may not add due to rounding.
3. NCR refers to National Capital Region and includes Ottawa and Hull.
4. Other refers to federal departments and agencies.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985

Table 39
Federally Sponsored University Research by Agency
1982-83

Region	MRC		NSERC		SSHRC		Other		Total		
	$000	%	$000	%	$000	%	$000	%	$000	%	% G.C.
Nfld	1,813	1.7	3,930	1.7	482	1.1	1,402	1.8	7,627	1.7	81.6
PEI	-	-	188	0.1	98	0.2	52	0.1	337	0.1	84.6
NS	4,103	3.8	8,314	3.7	1,204	2.7	2,569	3.3	16,190	3.5	84.1
NB	-	-	4,492	2.0	639	1.4	1,071	1.4	6,202	1.4	82.7
Que	34,887	32.6	45,868	20.2	11,655	25.8	12,400	15.9	104,810	22.9	88.2
Ont	37,478	35.0	86,692	38.2	18,990	42.0	19,022	24.4	162,182	35.5	88.3
Man	5,891	5.5	9,576	4.2	1,383	3.1	3,855	5.0	20,705	4.5	81.4
SASK	2,817	2.6	9,500	4.2	566	1.3	2,036	2.6	14,920	3.3	86.4
Alta	8,510	7.9	20,442	9.0	2,144	4.7	2,220	2.9	33,316	7.3	93.3
BC	8,443	7.9	28,069	12.4	4,498	9.9	27,485	35.3	68,495	15.0	59.9
NCR	2,694	2.5	10,145	4.5	2,616	5.8	4,064	5.2	19,519	4.3	79.2
CANADA	107,095	100.0	227,238	100.0	45,231	100.0	77,811	100.0	457,375	100.0	83.0

Notes:
1. Components do not add to Canada total due to exclusion of unallocated funds and Yukon.
2. Components may not add due to rounding.
3. NCR refers to National Capital Region and includes Ottawa and Hull.
4. Other refers to federal departments and agencies.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985

Table 40
Federally Sponsored University Research by Agency
1983-84

Region	MRC		NSERC		SSHRC		Other		Total		
	$000	%	$000	%	$000	%	$000	%	$000	%	% G.C.
Nfld	1,876	1.7	4,844	1.9	622	1.4	1,592	1.8	8,934	1.8	82.2
PEI	-	-	133	0.1	166	0.4	61	0.1	360	0.1	83.1
NS	4,792	4.2	9,580	3.7	1,174	2.7	4,034	4.4	19,580	3.8	79.4
NB	-	-	5,377	2.1	481	1.1	1,804	2.0	7,662	1.5	76.5
Que	32,244	28.4	52,035	19.9	11,525	26.5	14,237	15.7	110,041	21.6	87.1
Ont	39,399	34.7	103,717	39.6	17,007	39.1	21,872	24.0	181,995	35.7	88.0
Man	7,047	6.2	9,017	3.4	1,168	2.7	4,011	4.4	21,243	4.2	81.1
SASK	3,751	3.3	11,535	4.4	407	0.9	1,961	2.2	17,654	3.5	88.9
Alta	10,014	8.8	22,728	8.7	1,812	4.2	4,052	4.5	38,606	7.6	89.5
BC	11,230	9.9	31,015	11.9	4,060	9.3	29,473	32.4	75,778	14.9	61.1
NCR	3,145	2.8	11,616	4.4	2,786	6.4	4,217	4.6	21,764	4.3	80.6
CANADA	113,498	100.0	261,646	100.0	43,520	100.0	90,945	100.0	509,609	100.0	82.2

Notes:
1. Components do not add to Canada total due to exclusion of unallocated funds and Yukon.
2. Components may not add due to rounding.
3. NCR refers to National Capital Region and includes Ottawa and Hull.
4. Other refers to federal departments and agencies.

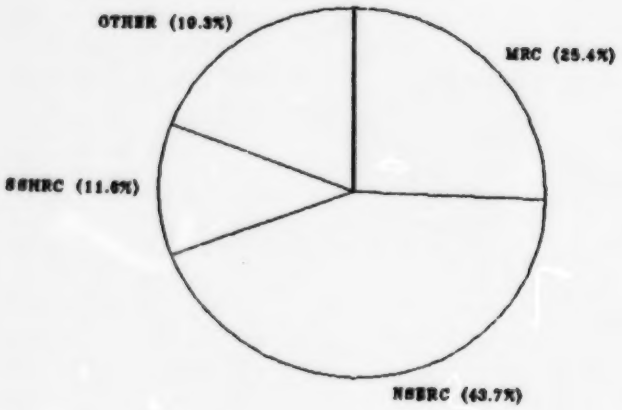
Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985

Figure 24

% Distribution of Federally Sponsored
University Research in Can. & Sask.

1979-80

CANADA



SASKATCHEWAN

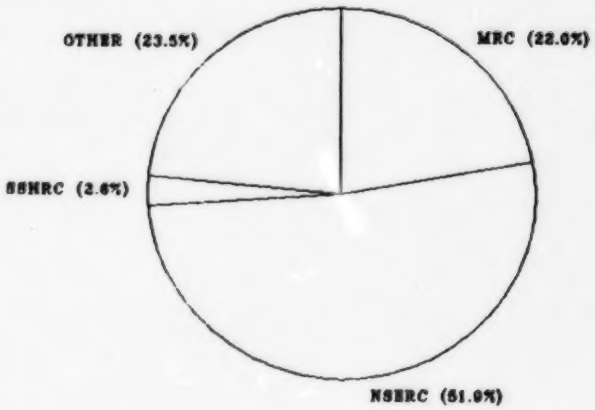
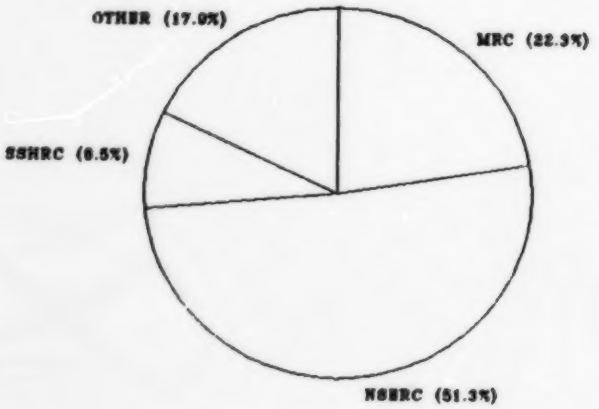


Figure 24 concluded

% Distribution of Federally Sponsored
University Research in Can. & Sask.

1983-84

CANADA



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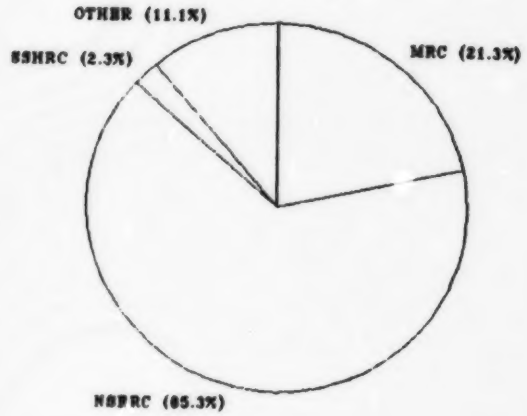
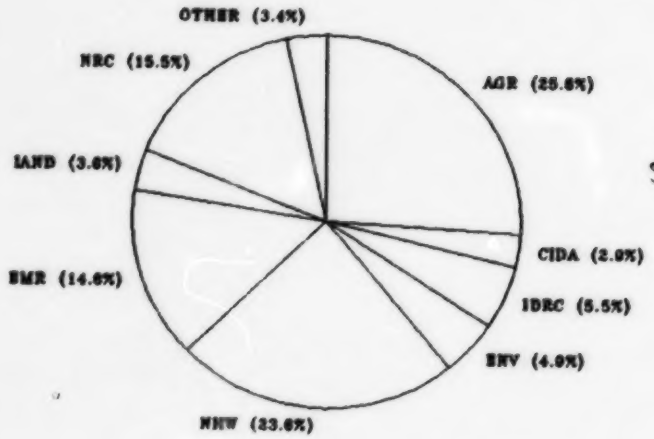


Figure 25

Saskatchewan Universities' Receipts

Federal Departments/Agencies, 1981-82



Saskatchewan Universities' Receipts

Federal Departments/Agencies, 1983-84

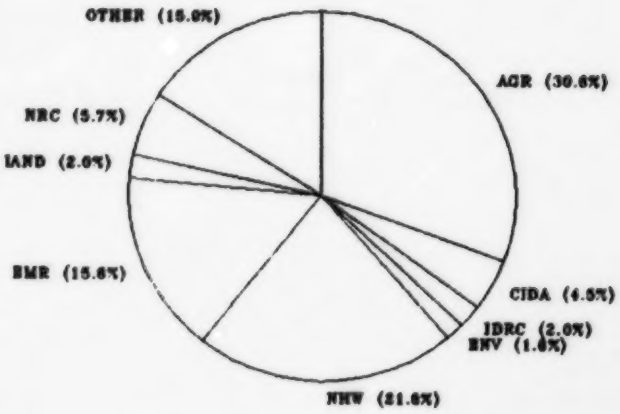


Table 41
Saskatchewan Universities' Receipts for Sponsored Research from Federal Departments/Agencies
1981-82 to 1983-84

Department/ Agency	1981-82 ($000)			1982-83 ($000)			1983-84 ($000)		
	Grants	Contracts	Total	Grants	Contracts	Total	Grants	Contracts	Total
AGR	133	425	558	135	529	664	145	455	600
CIDA	-	62	62	-	116	116	-	89	89
EMR	107	213	320	80	94	174	46	264	310
ENV	32	74	106	45	96	141	21	10	31
IAND	52	25	77	38	45	83	40	-	40
IDRC	118	-	118	17	-	17	40	-	40
NHW	503	7	510	445	21	466	428	-	428
NRC	-	336	336	-	206	206	-	111	111
Other	-	74	74	39	130	169	45	267	312
TOTAL	945	1216	2161	799	1237	2036	765	1196	1961

Notes: 1. Exludes the three federal granting councils - MRC, NSERC and SSHRC.
2. AGR - Agriculture; CIDA - Canadian International Development Agency; EMR - Energy, Mines and Resources; ENV - Environment; IAND - Indian Affairs and Northern Development; IDRC - International Development Research Centre; NHW - National Health and Welfare; NRC - National Research Council.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985.

6.0 Funding of Scientific Activity in the Business Sector

6.1 This section provides summary data on the Federal Government's direct support of scientific activity in the business sector, with emphasis on Saskatchewan's share of federal support. Federal Government support for scientific activity performed by the business sector provided through tax incentives is excluded. The business sector is defined as business and government enterprises including public utilities and government-owned firms. Industrial research institutions located at Canadian universities are considered as part of the university sector.

6.2 Federally sponsored scientific activity performed by the business sector in Canada increased 59.1% between 1979-80 ($263.8 million) and 1983-84 ($419.6 million). Federal funds to support scientific activity in the business sector in Saskatchewan increased 25.2% between 1979-80 ($3.4 million) and 1983-84 ($4.2 million) (Table 42).

6.3 On an annual basis, Saskatchewan growth in expenditures in the business sector markedly lagged the national rate for both 1981-82 and 1982-83.

6.4 In 1983-84, Saskatchewan ranked ninth ($4.2 million), receiving 1.0% of all federal funds for

scientific activity performed in the business sector. This performance is a decrease from seventh position and 1.3% share of funding experienced in 1979-80 (Table 42).

6.5 In 1983-84, Ontario, Quebec and the NRC combined received 73.3% of all federal funds for scientific activity performed in the business sector. This concentration of funding in these three regions remained relatively unchanged from the 73.4% share experienced in 1979-80 (Figure 26). There was some shifting of share, however among these three regions with Quebec increasing from 26.1% to 33.2% at the expense of the other two regions. The Atlantic provinces also improved their share from 3.6% to 5.6% over this same five year period.

6.6 Saskatchewan has experienced a large increasing shortfall in the area of federally sponsored scientific activity in the business sector. By 1983-84, the population shortfall had increased 82.6% from $6.1 million in 1979-80 to $11.2 million and the gross domestic product shortfall had increased 84.9% from $6.1 million in 1979-80 to $11.4 million (Table 44 and Figure 27).

6.7 The western provinces of Alberta, Manitoba and Saskatchewan and the Atlantic provinces of Newfoundland and New Brunswick have consistently received a significantly low allocation of federal funding in the business sector based on provincial contributions to population and gross domestic product (Figure 28).

6.8 The federal government supports scientific activity in the business sector through grants and contracts. In 1983-84, Saskatchewan's business sector received 74% (160% in 1982-83) of its funding in the form of grants and the remaining 26% (40% in 1982-83) as contracts (Tables 45 and 46). This distribution differed from the national breakdown of 58% grants and 42% contracts. Generally speaking, provinces with low industrial capacity for R & D appear to be favoured with more grants than contracts. In the awarding of grants, the federal government has more flexibility in favouring disadvantaged regions than in the awarding of contracts.

6.9 Saskatchewan has experienced an increased emphasis on grants as a form of payment for scientific activity in the business sector. In 1983-84, grants increased to $3.1 million (74% of total payments) from $1.7 million (26%) in 1979-80. Contractual payments decreased to $1.1 million in 1983-84 (26% of total receipts) from $1.7 million in 1979-80 (51%). (Table 41 and Figure 29).

6.10 In 1983-84, support for R & D comprised 91.8% ($3.9 million) of the total federal payments received by the Saskatchewan business sector for scientific activity (Tables 47 and 48 and Figure 30). The allocation between R & D and RSA support in Saskatchewan differs markedly from the national distribution where 85.9% of funding supports R & D and 14.1% is allocated towards related scientific activities (RSA).

6.11 Four departments were the major sources of funding to the Saskatchewan business sector in 1983-84: Industry, Trade and Commerce's Grains and Oilseeds Program (18.8%) and Trade-Industrial Program (29.4%); National Research Council (24.2%); Energy, Mines and Resources Earth Sciences (8.6%) and Energy Programs (4.2%); and Agriculture's Research Program (6.1%) (Table 49 and Figure 31). These departmental allocations varied quite markedly from expenditures in 1979-80 when the Department of Communications had a 16.5% share; ITC had 20.6% for its Grains and Oilseeds Program and 8.8% for its Trade-Industrial Program; EMR had 16.5% for its Earth Sciences Program and 7.6% for its Energy Program; NRC had 18.8%; and Agriculture only had a 3.9% share.

Table 42

Federally Sponsored Scientific Activity in the Business Sector

1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	$000	%	$000	%	$000	%	$000	%	$000	%
Nfld	1,781	(4.5)	2,955	65.9	1,703	(42.4)	2,322	36.3	4,213	81.4
PEI	716	4.1	894	24.9	861	(3.7	2,488	189.0	1,879	(24.5)
NS	3,929	(68.1)	18,263	364.8	16,520	(9.5)	9,369	(43.3)	10,869	16.0
NB	2,918	149.6	1,503	(48.5)	876	(41.7)	2,653	202.9	6,819	157.0
Que	68,951	34.5	65,266	(5.3)	85,600	31.2	105,164	22.9	139,142	32.3
Ont	90,330	(2.3)	98,931	9.5	93,617	(5.4)	112,660	20.3	115,475	2.5
Man	2,514	32.7	4,504	79.2	6,430	42.7	5,870	(8.7)	10,368	76.6
SASK	3,395	8.0	4,151	22.3	3,796	(8.6)	3,879	2.2	4,249	9.5
Alta	8,607	(4.8)	7,512	(12.7)	7,755	3.2	9,794	26.3	15,289	56.1
BC	20,098	59.8	25,950	29.1	20,278	(21.9)	35,243	73.8	26,021	(26.2)
NCR	34,450	17.6	43,439	26.1	40,671	(6.4)	60,098	47.8	52,913	(12.0)
TOTAL	263,791	6.4	300,594	14.0	315,967	5.1	385,734	22.1	419,563	8.8

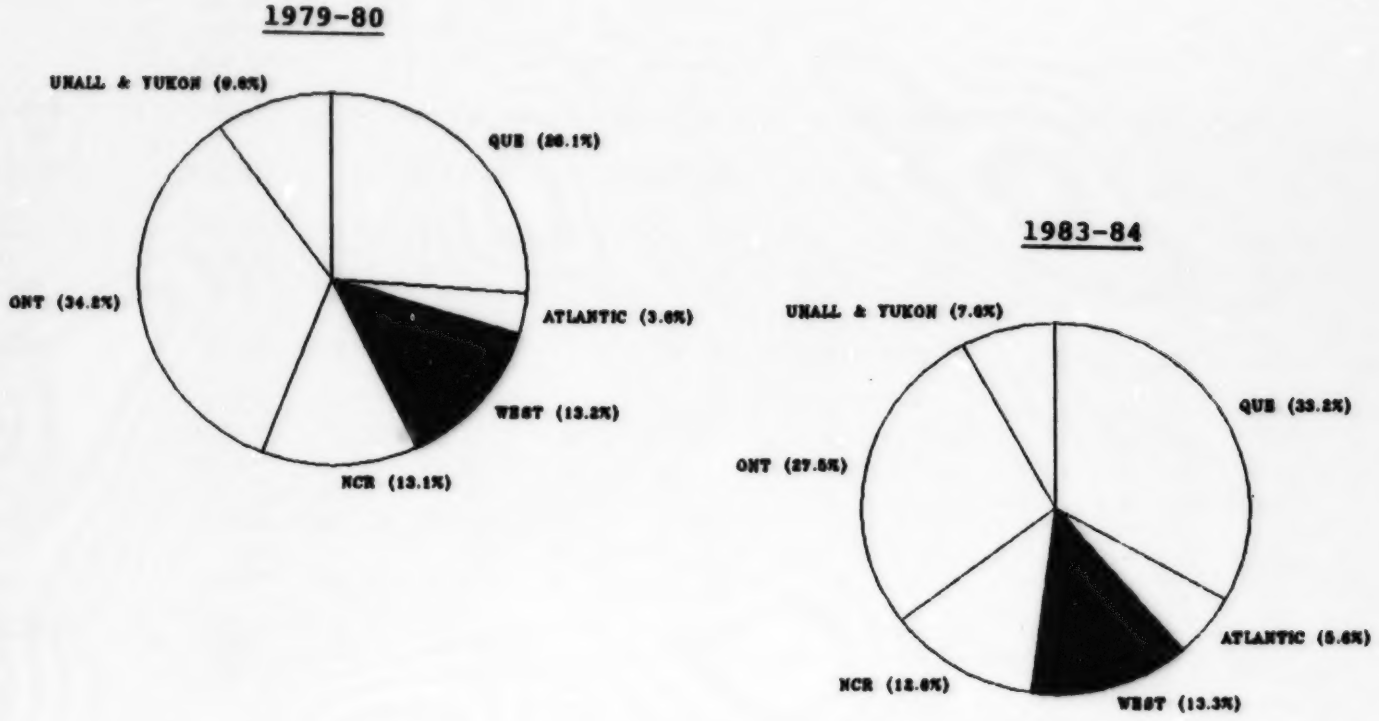
Notes:
1. Components do not add to Canada total due to exclusion of unallocated funds and Yukon.
2. NCR refers to National Capital Region and includes Ottawa and Hull.
3. Figures do not include any type of tax incentives.
4. Percentage indicates change from previous year.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985.

Figure 26

Federally Sponsored Scientific Activity

Business Sector Regional Allocation



Note: UNALL means unallocated; NCR refers to National Capital Region.

Table 43
Federally Sponsored Scientific Activity in the
Business Sector Regional Allocation and Ranking
1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Nfld	0.7	10	1.0	9	0.5	9	0.6	10	1.0	9
PEI	0.3	11	0.3	11	0.3	10	0.6	10	0.4	11
NS	1.5	6	6.1	5	5.2	5	2.4	6	2.6	6
NB	1.1	8	0.5	10	0.3	10	0.7	9	1.6	8
Que	26.1	2	21.7	2	27.1	2	27.3	2	33.2	1
Ont	34.2	1	32.9	1	29.6	1	29.2	1	27.5	2
Man	1.0	9	1.5	7	2.0	7	1.5	7	2.5	7
SASK	1.3	7	1.4	8	1.2	8	1.0	8	1.0	9
Alta	3.3	5	2.5	6	2.5	6	2.5	5	3.6	5
BC	7.6	4	8.6	4	6.4	4	9.1	4	6.2	4
NCR	13.1	3	14.5	3	12.9	3	15.6	3	12.6	3
TOTAL	100.0		100.0		100.0		100.0		100.0	

Notes: 1. Components do not add to total due to the exclusion of unallocated funds and Yukon.
2. NCR refers to National Capital Region and includes Ottawa and Hull.
3. Figures do not include any type of tax incentives.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985.

Figure 27

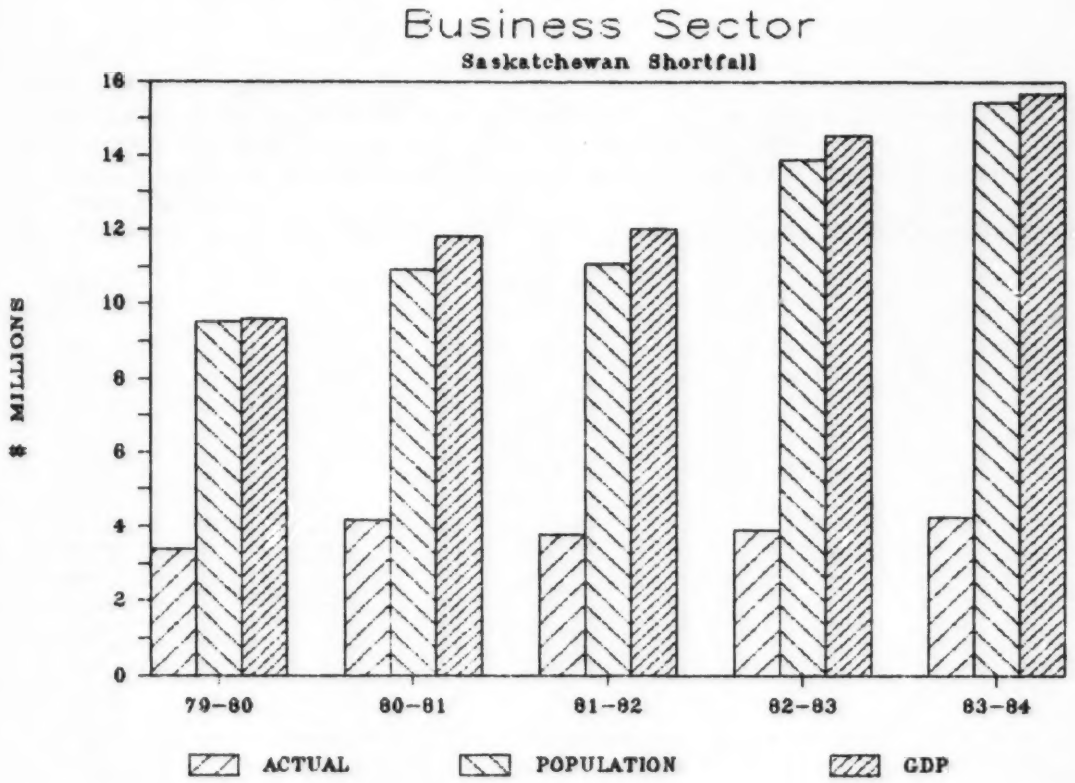

Business Sector
Saskatchewan Shortfall
$ MILLIONS
16
14
12
10
8
6
4
2
0
79-80
80-81
81-82
82-83
83-84
ACTUAL
POPULATION
GDP

Table 44

Federally Sponsored Scientific Activity in the Business Sector Population and GDP Expenditure Ratios 1979-80 to 1983-84

Region	1979-80		1980-81		1981-82		1982-83		1983-84	
	Pop.	GDP	Pop.	GDP	Pop.	GDP	Pop.	GDP	Pop.	GDP
Nfld	0.32	0.54	0.46	0.84	0.26	0.47	0.29	0.50	0.47	0.81
PEI	0.59	1.08	0.64	1.17	0.62	1.15	1.42	2.54	0.97	1.62
NS	0.47	0.73	1.90	3.23	1.71	2.84	0.77	1.18	0.81	1.20
NB	0.42	0.61	0.19	0.34	0.10	0.19	0.27	0.44	0.62	0.96
Que	1.09	1.25	0.90	1.04	1.16	1.35	1.14	1.33	1.37	1.60
Ont	1.06	1.00	1.02	0.97	0.95	0.90	0.91	0.87	0.84	0.79
Man	0.24	0.28	0.39	0.45	0.55	0.62	0.40	0.44	0.64	0.72
SASK	**0.36**	**0.35**	**0.38**	**0.35**	**0.34**	**0.32**	**0.28**	**0.27**	**0.28**	**0.27**
Alta	0.42	0.28	0.31	0.20	0.30	0.20	0.30	0.20	0.42	0.28
BC	0.78	0.70	0.86	0.78	0.65	0.59	0.89	0.84	0.59	0.57
Ont & NCR	1.46	1.39	1.46	1.39	1.36	1.29	1.40	1.33	1.23	1.15
SASK SHORTFALL ($M)	**6,136**	**6,184**	**6,756**	**7,658**	**7,273**	**8,218**	**9,998**	**10,662**	**11,202**	**11,434**
% CHANGE	**11.5**	**12.8**	**10.1**	**23.8**	**7.7**	**7.3**	**37.5**	**29.7**	**12.0**	**7.2**

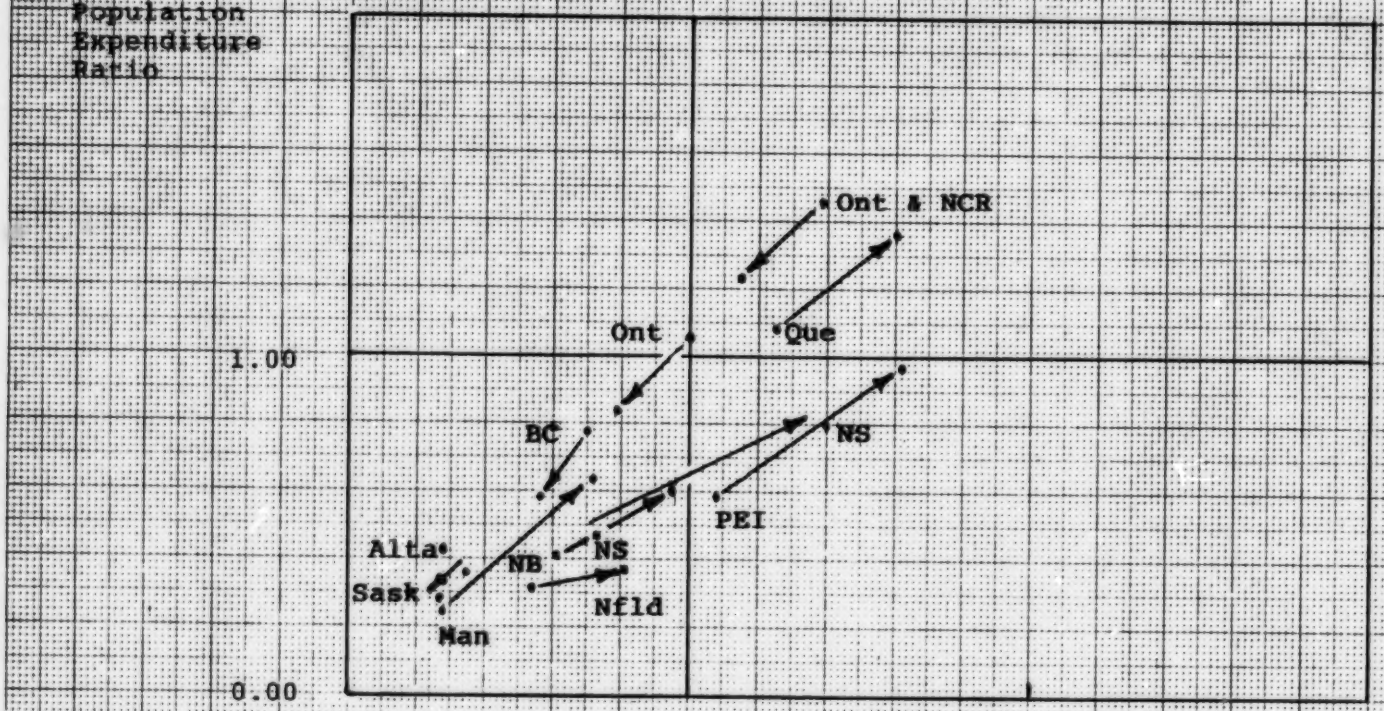
Note: Population and GDP expenditure ratios represent relationship between actual federal scientific expenditures in the business sector and expenditures if based on population and gross domestic product proportions.

METRIC

Figure 28

Federally Sponsored Scientific Activity
in the Business Sector Population and GDP Allocation

1979-80 compared to 1983-84



→ Direction of change 1979-80 to 1983-84

Table 45
Federal Expenditures in the Business Sector
by Region and Form of Payment
1982-83

Region	Percent of Payments for			
	R&D Grants	R&D Contracts	RSA Grants	RSA Contracts
Nfld	55	23	6	16
PEI	19	3	78	-
NS	52	39	2	6
NB	64	31	-	4
Que	52	30	3	15
Ont	49	42	5	5
Man	60	37	1	2
SASK	59	35	1	5
Alta	31	56	2	11
BC	32	52	2	14
NCR	45	43	4	8
CANADA	43	37	11	9

Notes: 1. Expenditures are for the Natural and Engineering Sciences only.
2. Yukon is included in British Columbia.
3. NCR refers to the National Capital Region.

Source: Statistics Canada. Federal Scientific Activities 1984/85. October 1984.

Table 46
Federal Expenditures in the Business Sector
by Region and Form of Payment
1983-84

Region	Percent of Payments for			
	R&D Grants	R&D Contracts	RSA Grants	RSA Contracts
Nfld	30.3	51.1	0.2	18.4
PEI	44.5	18.2	29.2	8.1
NS	54.2	38.3	3.4	4.1
NB	76.6	20.2	1.3	1.9
Que	69.8	27.2	0.2	2.8
Ont	50.6	42.3	1.6	5.5
Man	72.3	25.2	0.1	2.4
SASK	74.0	17.8	-	8.2
Alta	29.0	54.3	1.6	15.1
BC	27.5	61.0	1.5	10.0
NCR	32.7	49.5	1.2	16.6
CANADA	50.2	35.7	7.8	6.3

Notes: 1. Expenditures are for the Natural and Engineering Sciences and Social Sciences and Humanities.
2. NCR refers to the National Capital Region and includes Ottawa and Hull.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985.

Figure 29

Federally Sponsored Scientific Activity

in Saskatchewan Business Sector

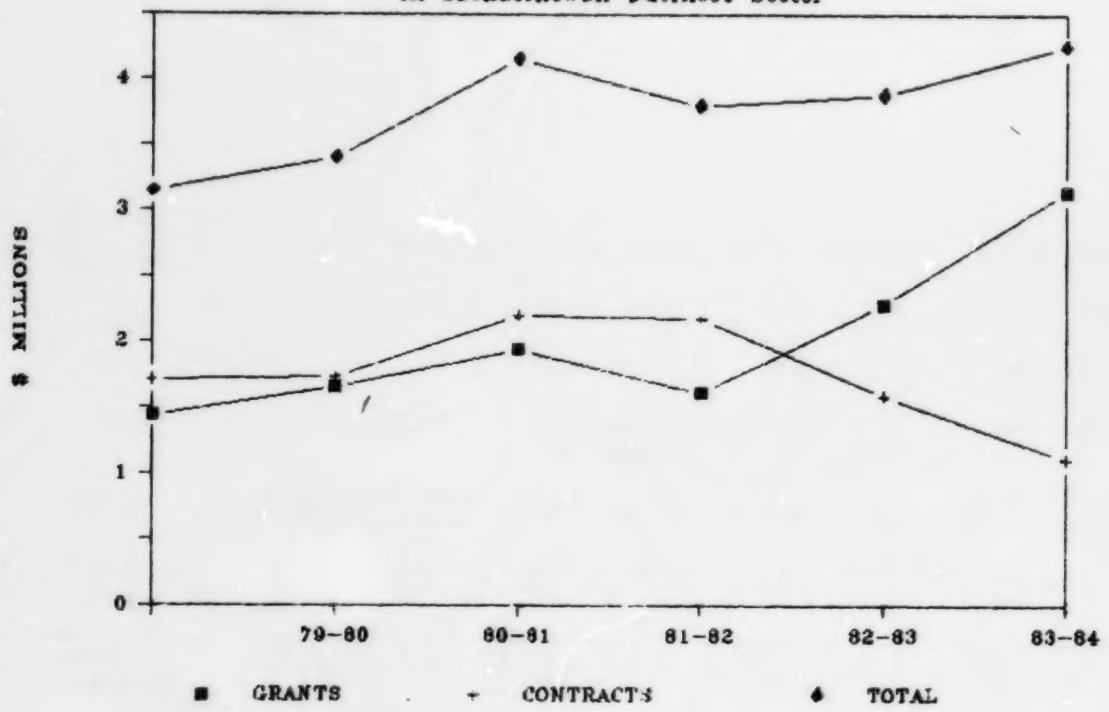


Table 47

Federal Payments to Business Sector in Saskatchewan for Scientific Activity 1979-80 to 1983-84

Form of Payment	1979-80		1980-81		1981-82		1982-83		1983-84	
	$000	%	$000	%	$000	%	$000	%	$000	%
R&D Grants	1,657	15.3	1,924	16.1	1,597	(17.0)	2,260	41.5	3,143	39.1
R&D Contracts	1,625	10.4	2,048	26.0	1,944	(5.1)	1,370	(29.5)	758	(44.7)
Total R&D	3,282	12.8	3,972	21.0	3,541	(10.9)	3,630	2.5	3,901	7.5
RSA Grants	-	-	21	-	18	(14.3)	29	61.1	-	-
RSA Contracts	112	(52.1)	158	41.1	237	50.0	220	(7.2)	348	58.2
Total RSA	112	(52.1)	179	59.8	255	42.5	249	(2.4)	348	39.8
TOTAL	3,394	8.0	4,151	22.3	3,796	(8.6)	3,879	2.2	4,249	9.5

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985.

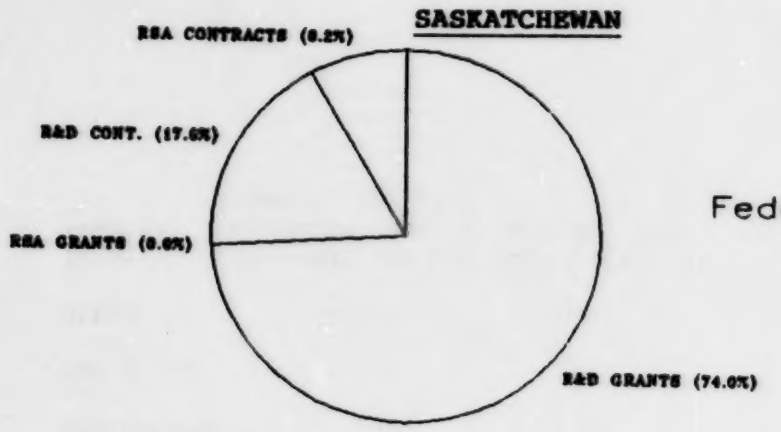
Table 48
Distribution of Federal Payments to Business Sector in Saskatchewan for Scientific Activity
1979-80 to 1983-84

Form of Payment	1979-80 % of Total	1980-81 % of Total	1981-82 % of Total	1982-83 % of Total	1983-84 % of Total
R&D Grants	48.8	46.4	42.1	58.3	74.0
R&D Contracts	46.8	49.3	51.2	35.3	17.8
Total R&D	96.7	95.7	93.3	93.6	91.8
RSA Grants	-	0.5	0.5	0.7	-
RSA Contracts	3.3	3.8	6.2	5.7	8.2
Total RSA	3.3	4.3	6.7	6.4	8.2
TOTAL	100.0	100.0	100.0	100.0	100.0

Note: Components may not add to total due to rounding.
Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985.

Figure 30

Federally Sponsored Scientific Activity
In Can. & Sask Business Sector, 1983-84



Federally Sponsored Scientific Activity
In Can. & Sask Business Sector, 1983-84

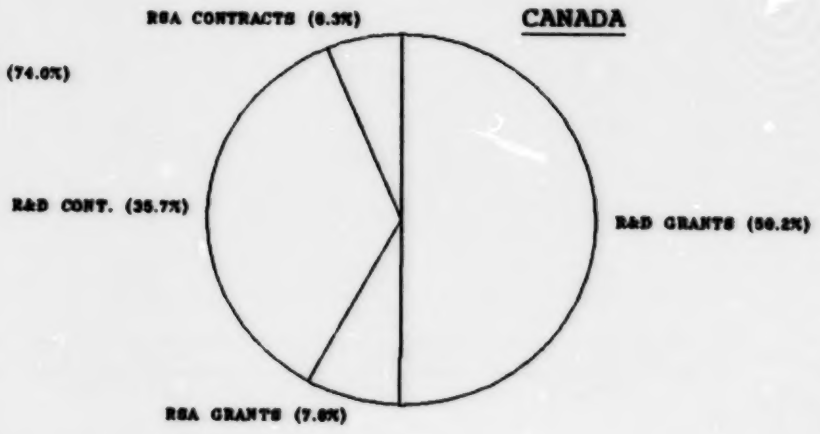


Table 49
Federal Expenditures to the Business Sector
in Saskatchewn by Department and Program
1979-80 to 1983-84

Department/ Program	1979-80		1980-81		1981-82		1982-83		1983-84	
	$000	%	$000	%	$000	%	$000	%	$000	%
AGR RES	130.7	3.9	175.1	4.2	117.0	3.1	79.8	2.1	257.3	6.1
AECB	-	-	-	-	-	-	15.0	0.4	-	-
AECL	-	-	28.0	0.7	-	-	387.0	10.0	-	-
CIC	-	-	-	-	12.0	0.3	-	-	-	-
CMHC	-	-	8.5	0.2	20.3	0.5	-	-	9.8	0.2
CTC	-	-	-	-	-	-	18.0	0.5	7.0	0.2
COMM	561.4	16.5	53.4	1.3	295.1	7.8	-	-	76.5	1.8
E&I E&I	-	-	-	-	11.5	0.3	-	-	-	-
EMR EM/ES	559.5	16.5	983.0	23.7	419.4	11.1	188.7	4.9	364.6	8.6
EMR EP	259.1	7.6	69.1	1.7	31.6	0.8	-	-	178.1	4.2
ENV AES	24.6	0.7	47.8	1.1	89.1	2.3	24.6	0.6	59.6	1.4
ENV EMS	21.2	0.6	62.8	1.5	49.5	1.3	23.2	0.6	3.5	0.1
ENV EPS	27.4	0.8	-	-	-	-	2.0	-	20.6	0.5
ENV FO	-	-	-	-	-	-	91.3	2.4	-	-
ENV PC	3.5	0.1	4.9	0.1	27.9	0.7	-	-	4.9	0.1
ENV PO	48.0	1.4	-	-	-	-	-	-	-	-
IAND NA	-	-	-	-	-	-	15.0	0.4	-	-
ITC G&O	700.0	20.6	641.4	15.5	600.0	15.8	600.0	15.5	800.0	18.8
ITC T-I	297.9	8.8	751.7	18.1	439.4	11.6	817.4	21.1	1,249.8	29.4
LAB	-	-	-	-	-	-	5.4	0.1	-	-
NDEF SER	-	-	26.8	0.7	430.1	11.3	559.9	14.4	69.1	1.6
NHW HP	-	-	-	-	-	-	15.0	0.4	-	-
NRC ENS	639.2	18.8	1,200.3	28.9	1,199.1	31.6	843.0	21.7	1,027.5	24.2

Table 49 Continued

Department/ Program	1979-80 $000	%	1980-81 $000	%	1981-82 $000	%	1982-83 $000	%	1983-84 $000	%
NSERC	18.6	0.6	33.9	0.8	10.3	0.3	23.4	0.6	18.5	0.4
PW PTS	-	-	12.0	0.3	12.5	0.3	165.0	4.3	-	-
REE	6.6	0.2	-	-	-	-	-	-	-	-
SC	-	-	-	-	-	-	-	-	26.0	0.6
SECS CIT	-	-	21.0	0.5	-	-	-	-	-	-
S&S SUPP	86.4	2.6	16.9	0.4	31.3	0.8	5.5	0.1	76.1	1.8
TPT ADM	10.5	0.3	14.5	0.3	-	-	-	-	-	-
TOTAL	3,394.7	100.0	4,151.2	100.0	3,796.0	100.0	3,879.1	100.0	4,249.0	100.0

Table 49 Continued

Abbreviation	Department	Program
AGR RES	Agriculture	Research
AECB	Atomic Energy Control Board	
AECL	Atomic Energy of Canada Ltd.	
CDC	Canadian Dairy Commission	
CMHC	Canadian Mortage and Housing Corp.	
CTC	Canada Transport Commission	
COMM	Communications	
E&I E&I	Employment and Immigration	Employment and Immigration
EMR EM/ES	Energy, Mines and Resources	Minerals and Earth Sciences
EMR EP	Energy, Mines and Resources	Energy Program
ENV AES	Environment	Atmosphic Environment Service
ENV EMS	Environment	Environmental Conservation Service
ENV EPS	Environment	Environmental Protection Service
ENV FO	Environment	Forestry
ENV PC	Environment	Parks Canada
ENV PO	Environment	
IAND NA	Indian Affairs & Northern Development	Northern Affairs
ITC G&O	Industry, Trade & Commerce	Grains and Oilseeds
ITC T-I	Industry, Trade & Commerce	Trade-Industrial
LAB	Labour	
NDEF SER	National Defence	Defence Services
NHW HP	National Health & Welfare	Health Protection
NRC ENS	National Research Council	
NSERC	Natural Sciences & Engineering Research Council	

Table 49 Concluded

Abbreviation		Department	Program
PW	PTS	Public Works	Professional & Technical Services
REE		Regional Economic Expansion	
SC		Science Council of Canada	
SECS	CIT	Secretary of State	Citizenship
S&S	SUPP	Supply and Services	Supply
TPT	ADM	Transport	Administration

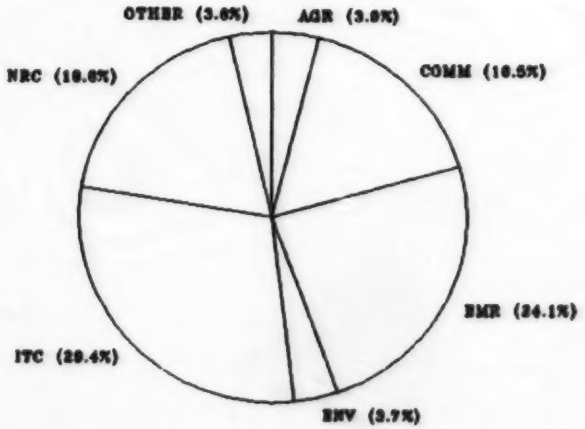
Note: Components may not add due to rounding.

Source: Statistics Canada. Science, Technology and Capital Stock Division. Region Data Summary. May 1985.

Figure 31

Payments to Business Sector by Dept.

1979-80



Payments to Business Sector by Dept.

1983-84

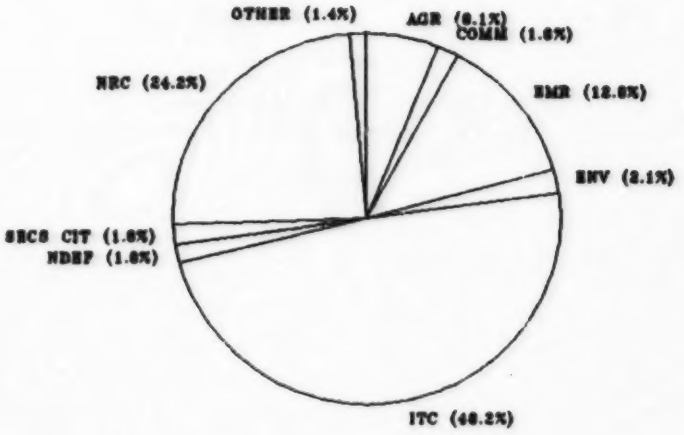
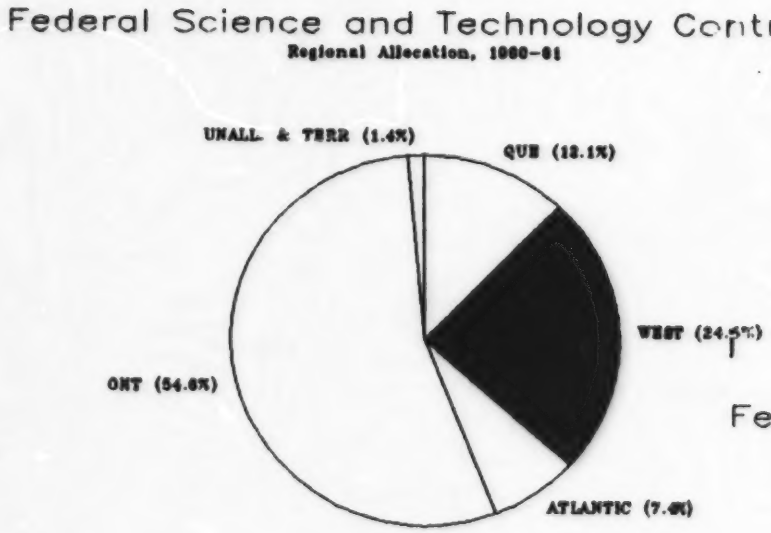
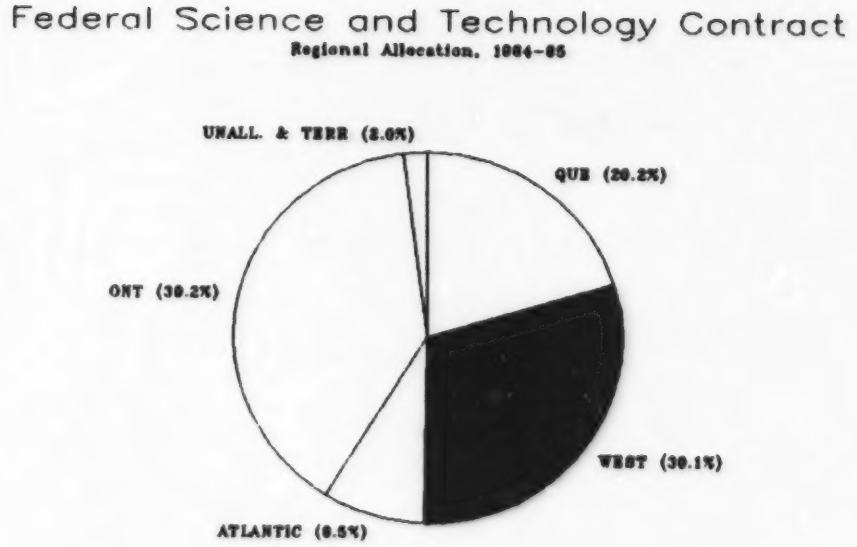


Figure 32





Note: UNALL means unallocated; NCR refers to National Capital Region.

7.0 Federal Science and Technology Contracts

7.1 This section provides summary data on the Federal Government's support of the research supply sector through its policy on contracting-out the government's requirements in science and technology. As part of its strategy for obtaining a more even balance between the in-house and industrial performance of its scientific requirements, the federal government has provided, since 1972, that its new requirements for mission-oriented research, development and feasibility studies in the natural sciences be contracted-out to industry, unless specifically otherwise provided. In 1974, this policy was extended to permit the government to respond promptly to sound, unique, unsolicited proposals from the private sector in support of government science missions. In 1977, this policy was expanded to include ongoing as well as new science and technology requirements; science and technology requirements in the natural sciences (inclusion of related scientific activities); science and technology requirements in the human and social science fields of urban, regional and transportation studies; and unsolicited proposals to meet a priority science and technology requirement.

7.2 It should be noted that eligible performers include non-profit organizations, universities and other public or para-public institutions such as provincial research organizations.

7.3 Federally, science and technology contracts awarded to the research community increased 109.2% between 1980-81 ($139.3 million) and 1984-85 ($291.5 million) (Table 50). Federal science and technology contracts performed in Saskatchewan more than doubled (110.1%) for the same period from $4.3 million in 1980-81 to $8.9 million in 1984-85.

7.4 In 1984-85, Saskatchewan ranked sixth among the provinces in terms of federal science and technology contracts. While, this is an improvement from seventh position in the previous year, it is unchanged from 1980-81 (Table 51). Saskatchewan's share of science and technology contracts remained unchanged from 1980-81 at a 3.1% share.

7.5 Consistent with the distribution of federal funding for scientific activity as described in previous sections of this report, the provinces of Ontario and Quebec received 59.5% of total contracts in 1984-85. This share, however, is a decrease from 66.7% of total contracts in 1980-81 (Figure 32). The Western provinces have increased their share from 24.5% to 30.1% over the five years, however, Manitoba and Saskatchewan's share remained unchanged.

7.6 Saskatchewan experienced an increasing shortfall in science and technology contracts based on

population and gross domestic product proportions as evidenced by a population shortfall increasing from $1.2 million in 1980-81 to $2.5 million in 1984-85 and a GDP shortfall increasing from $1.7 million in 1980-81 to $2.6 million in 1984-85 (Tables 52 to 56 and Figure 33). Saskatchewan's performance in 1984-85, however, has improved significantly from 1983-84 although a shortfall still exists.

7.7 The western provinces of Saskatchewan, Manitoba and Alberta have consistently received a disproportionately low share of science and technology contracts (Figure 34).

7.8 In terms of average science and technology contract value, Saskatchewan ranked second in 1984-85, an increase from third position in 1980-81 (Table 57). Saskatchewan's average contract value has consistently exceeded the average Canadian value throughout the five year review period.

7.9 The major federal departments providing science and technology contract funding to the Saskatchewan research supply sector are the same as the four federal departments with established scientific facilities within the province. In 1984-85, Energy, Mines and Resources awarded 40.1% of the science and technology contracts, the NRC - 26.8%, Agriculture - 11.4% and Environment - 7.5%. In 1982-83, the NRC provided 52.7% of total contracts whereas EMR provided 8.6% (Table 58).

7.10 In Saskatchewan, the business sector is the major performer of federal government science and technology contracts. In 1984-85, the business sector received 64.8% of contractual payments which was a decrease from 68.5% in 1982-83 (Table 59). The university sector was the next major performer with a 24.5% share (an increase from 23.8% in 1982-83). The Saskatchewan Research Council was a major performer in 1983-84 with a 34.5% share.

Table 50

Federal Science and Technology Contract Growth

1980-81 to 1984-85

Region	1980-81	1981-82		1982-83		1983-84		1984-85	
	$000	$000	%	$000	%	$000	%	$000	%
Nfld	2,608	9,688	271.5	3,870	(60.1)	6,588	70.2	5,984	(9.2)
PEI	475	1,993	319.6	632	(68.3)	1,300	105.7	709	(45.5)
NS	4,753	9,477	99.4	8,780	(7.4)	13,347	52.0	12,288	(7.9)
NB	2,514	3,129	24.5	2,683	(14.3)	4,854	80.9	5,794	19.4
Que	16,911	40,241	138.0	48,207	19.8	53,715	11.4	58,935	9.7
Ont	76,032	87,298	14.8	95,683	9.6	112,472	17.5	114,261	1.6
Man	3,920	3,992	1.8	4,483	12.3	4,820	7.5	8,203	70.2
SASK	4,263	6,215	150.5	6,446	3.7	6,252	(3.0)	8,956	43.3
Alta	4,808	12,043	150.5	8,960	(25.6)	14,288	59.5	21,834	52.8
BC	21,009	29,396	39.9	31,621	7.6	38,974	23.3	48,559	24.6
TOTAL	139,272	207,058	48.7	216,164	4.4	262,606	21.5	291,469	11.0

Notes: 1. Components do not add to total due to the exclusion of Yukon, N.W.T. and Other Contracts.

Source: Supply and Services Canada. Research and Development Bulletin.

Table 51
Federal Science and Technology Contract Regional Allocation and Ranking
1980-81 to 1984-85

Region	1980-81		1981-82		1982-83		1983-84		1984-85	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Nfld	1.9	8	4.7	5	1.8	8	2.5	6	2.1	8
PEI	0.3	10	1.0	10	0.3	10	0.5	10	0.2	10
NS	3.4	5	4.6	6	4.1	4	5.1	5	4.2	5
NB	1.8	9	1.5	9	1.2	9	1.9	8	2.0	9
Que	12.1	3	19.4	2	22.3	2	20.5	2	20.2	2
Ont	54.6	1	42.2	1	44.3	1	42.8	1	39.2	1
Man	2.8	7	1.9	8	2.1	7	1.8	9	2.8	7
SASK	3.1	6	3.0	7	3.0	6	2.3	7	3.1	6
Alta	3.5	4	5.8	4	4.1	4	5.4	4	7.5	4
BC	15.1	2	14.2	3	14.6	3	14.8	3	16.7	3
TOTAL	100.0		100.0		100.0		100.0		100.0	

Notes: 1. Components do not add to total due to exclusion of Yukon, NWT and other contracts.

Source: Supply and Services Canada. Research and Development Bulletin.

Table 52

Population and GDP Federal Science and Technology Contract Ratios

1980 - 81

Region	Federal[1] S&T Contracts ($000)	National[2] Population Ratio (1980)	Population Equity Value[3] ($000)	Population Value Contract Ratio	National[4] GDP Ratio (1980)	GDP[5] Equity Value ($000)	GDP Value Contract Ratio
Nfld	2,608	.0235	3,237	0.81	.0129	1,777	1.47
PEI	475	.0051	702	0.68	.0028	386	1.23
NS	4,753	.0352	4,848	0.98	.0207	2,851	1.67
NB	2,514	.0289	3,980	0.63	.0164	2,259	1.11
Que	16,911	.2656	36,580	0.46	.2293	31,581	0.54
Ont	76,032	.3564	49,086	1.55	.3742	51,537	1.48
Man	3,920	.0426	5,867	0.67	.0369	5,082	0.77
SASK	4,263	.0399	5,495	0.78	.0432	5,950	0.72
Alta	4,808	.0890	12,258	0.39	.1380	19,006	0.25
BC	21,009	.1109	15,274	1.38	.1223	16,844	1.25
TOTAL[6]	137,727						
SASK SHORTFALL			1,232			1,687	

1 Supply and Services Canada. Research and Development Bulletin No. 109. April 1982.

2 Statistics Canada Daily -- August 1, 1981.

3 "Population Equity Value" represents federal contract distribution if based on population proportions.

4 Statistics Canada -- Provincial Economic Accounts. GDP at market prices.

5 "GDP Equity Value" represents federal contract distribution if based on gross domestic product proportions.

6 Total excludes contracts performed by "Others" ($1.545 million) and includes Yukon and NWT ($0.434 million).

Table 53

Population and GDP Federal Science and Technology Contract Ratios

1981 - 82

Region	Federal[1] S&T Contracts ($000)	National[2] Population Ratio (1981)	Population Equity Value[3] ($000)	Population Value Contract Ratio	National[4] GDP Ratio (1981)	GDP[5] Equity Value ($000)	GDP Value Contract Ratio
Nfld	9,688	.0233	4,725	2.05	.0130	2,659	3.64
PEI	1,993	.0050	1,023	1.95	.0027	552	3.61
NS	9,477	.0348	7,118	1.33	.0209	4,275	2.22
NB	3,129	.0286	5,850	0.53	.0166	3,395	0.92
Que	40,241	.2645	54,098	0.74	.2273	46,490	0.87
Ont	87,298	.3543	72,465	1.20	.3741	76,515	1.14
Man	3,992	.0402	8,631	0.46	.0374	7,649	0.52
SASK	6,215	.0398	8,140	0.76	.0432	8,836	0.70
Alta	12,043	.0919	18,796	0.64	.1393	28,491	0.42
BC	29,396	.1127	23,051	1.28	.1227	25,096	1.17
TOTAL[6]	204,530						
SASK SHORTFALL			1,925			2,621	

1 Supply and Services Canada. Research and Development Bulletin No. 121. April 1983.

2 Statistics Canada Daily -- June 1, 1983.

3 "Population Equity Value" represents federal contract distribution if based on population proportions.

4 Statistics Canada -- Provincial Economic Accounts. GDP at market prices.

5 "GDP Equity Value" represents federal contract distribution if based on gross domestic product proportions.

6 Total excludes contracts performed by "Others" ($2.528 million) and includes Yukon and NWT ($1.058 million).

Table 54

Population and GDP Federal Science and Technology Contract Ratios

1982 - 83

Region	Federal[1] S&T Contracts ($000)	National[2] Population Ratio (1982)	Population Equity Value[3] ($000)	Population Value Contract Ratio	National[4] GDP Ratio (1982)	GDP[5] Equity Value ($000)	GDP Value Contract Ratio
Nfld	3,870	.0231	4,906	0.79	.0134	2,846	1.36
PEI	632	.0050	1,062	0.60	.0028	595	1.06
NS	8,780	.0346	7,348	1.19	.0227	4,821	1.82
NB	2,683	.0284	6,031	0.44	.0172	3,653	0.73
Que	48,207	.2631	55,874	0.86	.2270	48,208	1.00
Ont	95,683	.3539	75,157	1.27	.3708	78,746	1.09
Man	4,483	.0420	8,919	0.50	.0378	8,028	0.56
SASK	6,446	.0397	8,431	0.76	.0416	8,835	0.73
Alta	8,960	.0941	19,984	0.45	.1428	30,326	0.30
BC	31,621	.1133	24,061	1.31	.1201	25,506	1.24
TOTAL[6]	212,369						
SASK SHORTFALL			1,985			2,389	

1 Supply and Services Canada. Research and Development Bulletin No. 133. April 1984.

2 Statistics Canada Daily -- June 1, 1983.

3 "Population Equity Value" represents federal contract distribution if based on population proportions.

4 Statistics Canada -- Provincial Economic Accounts. GDP at market prices.

5 "GDP Equity Value" represents federal contract distribution if based on gross domestic product proportions.

6 Total excludes contracts performed by "Others" ($3.795 million) and includes Yukon and NWT ($1.004 million).

Table 55

Population and GDP Federal Science and Technology Contract Ratios

1983 - 84

Region	Federal[1] S&T Contracts ($000)	National[2] Population Ratio (1983)	Population Equity Value[3] ($000)	Population Value Contract Ratio	National[4] GDP Ratio (1983)	GDP[5] Equity Value ($000)	GDP Value Contract Ratio
Nfld	6,588	.0231	5,954	1.11	.0135	3,480	1.89
PEI	1,300	.0050	1,289	1.01	.0030	773	1.68
NS	13,347	.0345	8,893	1.50	.0234	6,032	2.21
NB	4,854	.0284	7,320	0.66	.0183	4,717	1.03
Que	53,715	.2618	67,482	0.80	.2249	57,971	0.93
Ont	112,472	.3543	91,325	1.23	.3772	97,228	1.16
Man	4,820	.0420	10,826	0.45	.0374	9,640	0.50
SASK	6,252	.0399	10,285	0.61	.0405	10,439	0.60
Alta	14,288	.0946	24,384	0.59	.1406	36,241	0.39
BC	38,974	.1136	29,282	1.33	.1175	30,287	1.29
TOTAL[6]	257,763						
SASK SHORTFALL			4,033			4,187	

1 Supply and Services Canada. Research and Development Bulletin No. 145. April 1985.

2 Saskatchewan Bureau of Statistics. January 1985. (Population as of June 1, 1983.)

3 "Population Equity Value" represents federal contract distribution if based on population proportions.

4 Statistics Canada -- Provincial Economic Accounts. GDP at market prices.

5 "GDP Equity Value" represents federal contract distribution if based on gross domestic product proportions.

6 Total excludes contracts performed by "Others" ($4.843 million) and includes Yukon and NWT ($1.153 million).

Table 56

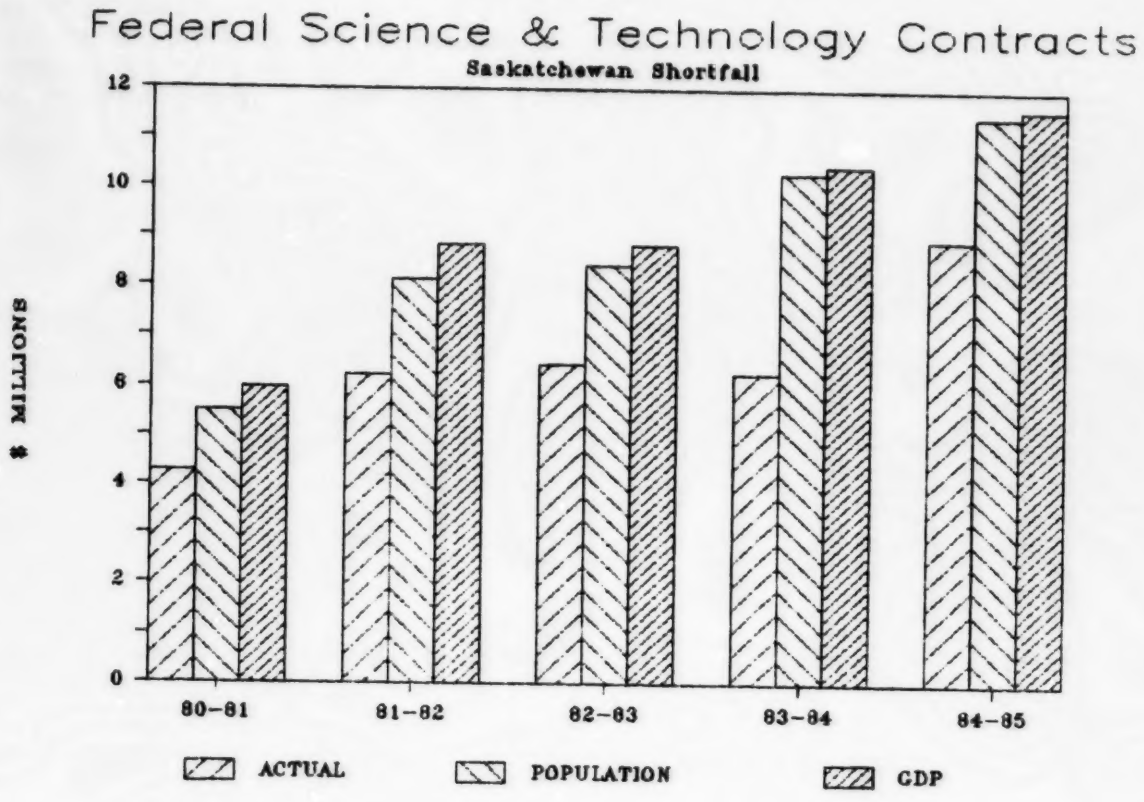
Population and GDP Federal Science and Technology Contract Ratios

1984 - 85

Region	Federal[1] S&T Contracts ($000)	National[2] Population Ratio (1984)	Population Equity Value[3] ($000)	Population Value Contract Ratio	National[4] GDP Ratio (1983)	GDP[5] Equity Value ($000)	GDP Value Contract Ratio
Nfld	5,984	.0231	6,617	0.90	.0135	3,867	1.55
PEI	709	.0050	1,432	0.50	.0030	859	0.83
NS	12,288	.0346	9,912	1.24	.0234	6,703	1.83
NB	5,794	.0284	8,136	0.71	.0183	5,242	1.11
Que	58,935	.2606	74,652	0.79	.2249	64,426	0.91
Ont	114,261	.3557	101,895	1.12	.3772	108,054	1.06
Man	8,203	.0420	12,031	0.68	.0374	10,714	0.77
SASK	8,956	.0400	11,459	0.78	.0405	11,602	0.77
Alta	21,834	.0935	26,784	0.82	.1406	40,277	0.54
BC	48,559	.1142	32,714	1.48	.1175	33,659	1.44
TOTAL[6]	286,463						
SASK SHORTFALL			2,503			2,646	

1 Supply and Services Canada. Research and Development Bulletin No. 145. April 1985.
2 Saskatchewan Bureau of Statistics. January 1985 (Population as of June 1, 1984.)
3 "Population Equity Value" represents federal contract distribution if based on population proportions.
4 Statistics Canada -- Provincial Economic Accounts. GDP at market prices.
5 "GDP Equity Value" represents federal contract distribution if based on gross domestic product proportions.
6 Total excludes contracts performed by "Others" ($5,006 million) and includes Yukon and NWT ($0.940 million).

Figure 33


Federal Science & Technology Contracts
Saskatchewan Shortfall
$ MILLIONS
12
10
8
6
4
2
0
80-81
81-82
82-83
83-84
84-85
ACTUAL
POPULATION
GDP

METRIC

Figure 34

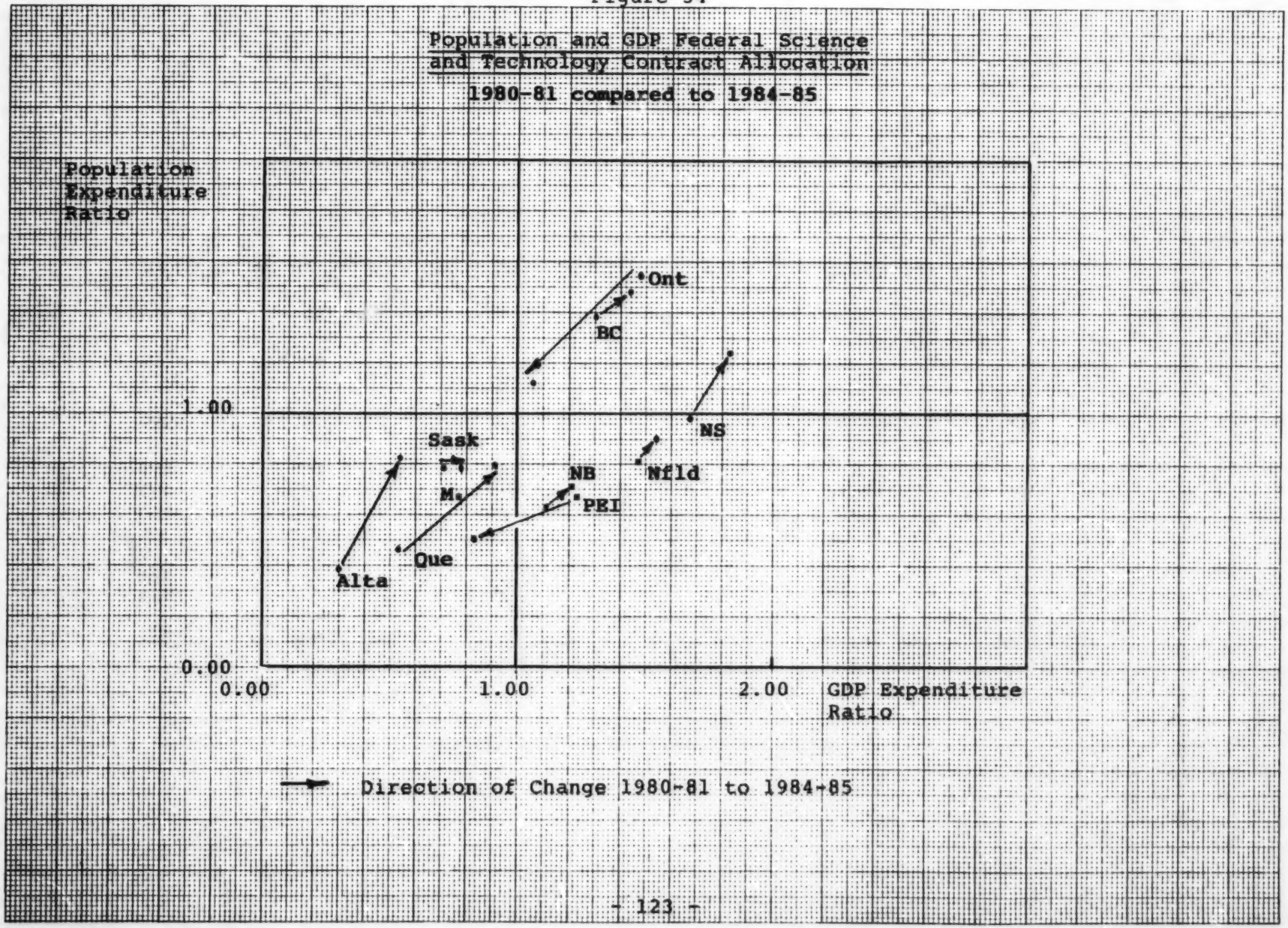


Table 57
Average Science and Technology Contract
1980-81 to 1984-85

Region	1980-81		1981-82		1982-83		1983-84		1984-85	
	$000	Rank	$000	Rank	$000	Rank	$000	Rank	$000	Rank
Nfld	37	7	113	1	33	7	36	8	41	8
PEI	23	9	51	7	17	10	41	6	25	10
NS	25	8	36	9	28	8	30	10	30	9
NB	20	10	25	10	23	9	31	9	44	7
Que	56	4	102	2	120	1	135	1	116	1
Ont	72	2	71	4	74	3	73	3	73	3
Man	103	1	58	6	36	6	40	7	52	5
SASK	61	3	90	3	88	2	86	2	75	2
Alta	51	5	68	5	50	4	55	4	70	4
BC	44	6	51	7	46	5	46	5	51	6
Canada	55		66		63		63		66	

Source: Supply and Services Canada. Research and Development Bulletin.

Table 58
Support from Federal Departments/Agencies
for Science and Technology Contracts
in Saskatchewan
1982-83 to 1984-85

Department	1982-83 $000	1982-83 % of Total	1983-84 $000	1983-84 %	1983-84 % of Total	1984-85 $000	1984-85 %	1984-85 % of Total
Agriculture	1,007	15.6	484	(51.9)	7.7	1,024	111.6	11.4
Energy, Mines and Resources	557	8.6	2,854	412.4	45.6	3,595	26.0	40.1
Environment	689	10.7	340	(50.6)	5.4	667	96.2	7.5
NRC	3,397	52.7	1,250	(63.2)	20.0	2,399	91.9	26.8
Other	796	12.4	640	(19.6)	10.2	1,271	98.6	14.2
TOTAL	6,446	100.0	6,252	(3.0)	100.0	8,956	43.3	100.0

Note: Total for 1983-84 has been adjusted to reflect updated contract information for this period. Department totals have not been adjusted and thus do not add to Total.

Source: Supply and Services Canada. Research and Development Bulletin.

Table 59
Saskatchewan Federal Science and Technology Contract Performers
1982-83 to 1984-85

Performer	1982-83 $000	1982-83 % of Total	1983-84 $000	1983-84 %	1983-84 % of Total	1984-85 $000	1984-85 %	1984-85 % of Total
Business	4,419	68.5	2,134	(51.7)	34.1	5,803	171.9	64.8
University	1,532	23.8	1,160	(24.3)	18.6	2,193	89.1	24.5
SRC	406	6.3	2,160	432.0	34.5	347	(83.9)	3.9
Other Canadian	89	1.4	114	28.1	1.8	613	437.7	6.8
TOTAL	6,446	100.0	6,252	(3.0)	100.0	8,956	43.3	100.0

Notes: 1. Total for 1983-84 has been adjusted to reflect updated contract information for this period. Performer totals have not been adjusted and thus do not add to Total.
2. Business includes provincial crown corporations. SRC refers to the Saskatchewan Research Council. Other Canadian includes individuals.

Source: Supply and Services Canada. Research and Development Bulletin.